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52

(Signed) John S. Worley





GREAT SOUTHERN RAILWAY.

Pick.

G R E A T

SOUTHERN RAILWAY,

A TRUNK LINE,

BETWEEN THE NORTH AND THE TROPICS,

TO WITHIN

NINETY MILES OF HAVANA,

CONNECTING AT THE

Nearest Possible Point

WITH THE WEST INDIES, CENTRAL AND

SOUTH AMERICA.

NEW YORK:
WM. P. HICKOK, STATIONER AND PRINTER,
95 Nassau Street.

1878



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PREFACE.

THE Great Southern Railway Company was incorporated by an Act of the Legislature of the State of Georgia, approved October 17th, 1870, with general and special powers to construct and operate a railroad from Millen to the St. Mary's River, there to connect with the road constructed in Florida. In connection with existing roads, it forms a direct through line between all the Southern, Western and Northern States and the West Indies, Central America, and South America.

The Great Southern Railway Company was incorporated by an Act of the Legislature of the State of Florida, approved February 19th, 1870, with all the general powers usually conferred upon railroad corporations, and with special powers to construct and operate a railroad from the St. Mary's River, on the northern boundary of Florida, to the most southerly available harbor of the State, and to own and operate, in connection with the road, and as an integral part of the Company's line, steamships and other sea-going vessels to Cuba and the other West India Islands and South America.

The two Companies were consolidated on the 10th day of November, 1874, under the name of the Great Southern Railway Company, (consolidated.)

The length of the road in Georgia is 200 miles ; in Florida, 550 miles, a total of 750 miles of main line, with a branch of 126 miles to Tampa Bay on the west side of the peninsula of Florida. Total 876 miles.

This railway is designed to connect the entire railway system of the United States with Cuba, the other West Indies, Southern Mexico, Central America and South America by the

most direct and close railway and steamship connections that can possibly be opened. It begins at Millen, on the Georgia Central road, where an air line railroad running south from New York city strikes the Georgia Central, and runs thence due south to Key West, the southernmost point in the United States.

Key West is within ninety miles of Havana, and the water communication with Cuba is reduced to a ferry across the Strait of Florida; and that to Hayti, San Domingo, and Jamaica and the other West India Islands, Southern Mexico, Central America and South America is 1,155 miles less than the now usual routes from New York.

INDEX.

P R E F A C E.

CHAPTER I.

INCORPORATION.

Florida Charter—Georgia Charter—Consolidation Act—Act of Congress Granting Right of Way—Letter of the Secretary of the Interior, Certifying the Filing of the Location Map—Consolidation of Companies.

CHAPTER II.

STATUS IN CONGRESS.

Bill before the Senate—Bill before the House of Representatives—Report of the Senate Committee—Report of the Committee of House of Representatives—Petition to Congress by Citizens of Key West.

CHAPTER III.

LOCATION OF THE ROAD.

The Location—Between Millen and Jesup, Georgia—Between Jesup, Georgia, and Jacksonville, Florida—Between Saint Mary's River and Turtle Harbor—Between Turtle Harbor and Key West—Letter from Hon. Stephen R. Malory—The Florida Keys and Harbors of the Road—Turtle Harbor—The Map.

CHAPTER IV.

EXTENSION OF THE ROAD BY STEAMSHIPS.

Steamship Transportation of the Company—American and European Steamships Trading with the West Indies, Central and South America—United States Merchant-Marine from 1845 to 1876—Distances of several Domestic and Foreign Ports from Key West—Railroads South of the United States.

CHAPTER V.

CONNECTIONS.

Panama Railroad—Railroad Connections—Saint John's Railroad—Jacksonville, Pensacola and Mobile Railroad—Florida Railroad—Brunswick and Albany Railroad—Jesup—Atlantic and Gulf Railroad—Macon and Brunswick Railroad—Central Railroad of Georgia—Augusta Branch—General Resources for Through Freights, and Passengers—River Connections—Altamaha—Satilla—Saint Mary's—Saint John's.

CHAPTER VI.

GEORGIA.

Area of the State—Census of 1870—Eastern Georgia—Advantages of the Position of Georgia—Water Sheds—External and Internal Relations of Georgia—Commercial Situation, best Site on the Continent—Effects of the late War—View of the Future—Immigration—General View of the Situation and Condition of the State—Variety of Products—Manufacturing Productions.

CHAPTER VII.

FLORIDA.

United States Lands in Florida—Florida Peninsula, Census—Description of the Country and its Productions—History—Soil—Field Crops—Sugar—Garden Vegetables—Fruits—Oranges and other Fruits—Fruit Culture in Florida—Game and Fish—Cotton—Sea Island Cotton—Letter of Commissioner of Agriculture—Stock Raising—Address by Dr. A. S. Baldwin—Temperature—Topography—Rainy Season—Health—Area and Population of the Italian Peninsula.

CHAPTER VIII.

PRODUCTS OF THE FORESTS.

Lumber—Value of Timber—Live Oak—Other Timber—Transportation of Lumber—Estimate of the Value of Yellow Pine—Naval Stores.

CHAPTER IX.

NAVAL, MILITARY AND MAIL.

Political Relations—Military and Naval—Letter from Admiral Porter—Letter from General Sherman—Letter from Post Master General Key—Mail Facilities—Postal Convention at Fortress Monroe, Va.—Extract from President's Message, 1874—Extracts from the Reports of the Post Master General, 1876–1877.

CHAPTER X.

WEST INDIES.

Description—Geographical Divisions—Political Divisions—Commerce.

CHAPTER XI.

SHIP CANAL ACROSS THE ISTHMUS.

Darien Ship Canal—Prospective Commerce through it—United States—England—France—Total—Nicaragua Ship Canal—Cost of Construction.

CHAPTER XII.

INTERNAL COMMERCE.

Products of the Soil of the United States, 1870—Report of the Commissioner of Agriculture, 1877—Internal Commerce—Transportation of Grain—Passengers—General Transportation—Shipments between New York and San Francisco via Panama, 1875-1877.

CHAPTER XIII.

THE COMMERCE OF THE VALLEY OF THE OHIO AS RELATED TO THE GREAT SOUTHERN RAILWAY.

Select Committee of the Senate on Transportation to the Seaboard—Character of Information—Magnitude of the Freights from the States West of the Alleghanies—Mixed Lines of Transportation—Storms and Snows of Winter—Commerce and Population of the Nations South—Harbor of New Orleans Before the Construction of the Jetties—Harbor of Savannah—Commerce of the Cities and Towns on the Ohio River—Grain Produced, Consumed In and Exported from the United States—Resources of the Valley of the Ohio—Valley of the Mississippi River—Tonnage on the Mississippi River.

CHAPTER XIV.

COMMERCIAL RELATIONS, 1877.

Argentine Republic—Port of Buenos Ayres—Brazil—Central America—Chili—United States of Colombia—Honduras—Porto Rico—Southern Commerce.

CHAPTER XV.

STATISTICS SOUTHERN COMMERCE.

. Commerce with the Nations South—Articles Imported and Exported from and to the West Indies, Mexico, Central America, Venezuela, and Granada, 1865–1870—Relative Commercial Importance of the West Indies in the Commerce of the United States, 1870—Trade of the United States with the Islands and Countries bordering on the Caribbean Sea, 1872—Trade of Uruguay with other Countries, 1873—Commerce of the United States with the Principal Nations, 1874—Export of Sugar and Molasses from Cuba, 1875—Wheat and Corn Exported from the United States to the West Indies and Central America, 1830–1876—Imports and Exports from the principal South American, Central American Countries, and the West India Islands, and Imports into the United States from the same, 1873–1876—Trade with South America, 1876—Commerce with Cuba, Peru, Colombia, Mexico, Argentine Republic, Chili, Uruguay and Brazil, 1876–1877—Tonnage Entered at New Orleans, 1853–1876—Report of the Commissioner of Agriculture, 1877.

CHAPTER XVI.

IMPORTED FRUIT.

Fruit from abroad—Tropical and Semi-Tropical Fruit—Official Statistics—Foreign Fruits which have been tested in Florida.

CHAPTER XVII.

SOUTHERN COMMERCE.--OPINIONS OF THE PRESS.

New York Herald, July 18, 1877—New York Tribune, August 1, 1877—New York Herald, August 18, 1877—New York Herald, August 24, 1877—New South, 1876.

CHAPTER XVIII.

TEXAS PACIFIC RAILWAY.

Extract from the Report of the Senate Committee—Extract from the Report of the Committee of the House of Representatives—Remarks by Representative House—Remarks by Senator Lamar—Remarks by Representative A. H. Stephens.

CHAPTER XIX.

MAIL SERVICE TO BRAZIL.

Extract from the Report of the Committee of the House of Representatives—Extract from the Report of the Committee of the Senate—Remarks by Senator Eustis—Remarks by Senator Maxey—Remarks by Senator Blaine—Remarks by Senator Sergeant—Remarks by Senator Eaton—Extract from a Letter by General Bussey.

CHAPTER XX.

APPROPRIATIONS FOR PUBLIC WORKS, AND SUMMARY.

United States Appropriations for Public Works—Advantages to be realized from the Construction of the Road.—Summary.

CHAPTER XXI.

ARGUMENT BEFORE THE COMMITTEES.

Organization — Location — Turtle Harbor — Objects of the Road—Advantages—In Congress—Railways in England, France and India—Iowa and Florida—United States Subsidies—Senator Malory—A Railroad Practicable to Key West—Military Importance of the Road—George Washington's Views—Georgia and Florida—Mails and Military—Lumber, Cotton and Cattle—Connections—Conclusion.



CHAPTER I.

INCORPORATION.

FLORIDA CHARTER; GEORGIA CHARTER; CONSOLIDATION; ACT OF CONGRESS GRANTING RIGHT OF WAY; LETTER OF THE SECRETARY OF THE INTERIOR CERTIFYING THE FILING OF LOCATION MAP; CONSOLIDATION OF COMPANIES.

FLORIDA CHARTER.

AN ACT

TO INCORPORATE THE GREAT SOUTHERN RAILWAY COMPANY, AND
TO PERFECT ONE OF THE PUBLIC WORKS OF THE STATE.

WHEREAS, It is the true intent and meaning of an act of the Legislature of Florida, entitled an Act to Provide for and Encourage a Liberal System of Internal Improvements in this State, approved January 6, 1855, and of an act entitled An Act to Perfect the Public Works of the State, approved June 24, 1869, and all amendments to the said acts, that new routes of rail and water communication in addition to those designated in said acts, shall be opened and established; AND WHEREAS, The public policy of this State favors the most liberal legislation in aid of such individuals or corporations as shall have for their object the development of the resources of the State, the establishment of external and internal commerce, the promotion of domestic trade and industry, and the general improvement of the country; therefore,

The people of the State of Florida, represented in Senate and Assembly, do enact as follows: SECTION 1. That Harrison Reed, George B. Carse, William H. Gleason, Thomas W.

Osborn, Marcellus L. Stearns, Horatio Jenkins, Jr., Charles M. Hamilton, Edward H. Reed, William J. Purman, Charles H. Pearce, and Josiah T. Walls, of the State of Florida, and A. C. Osborn of the State of New York, and such other persons as may become associated with them by becoming stockholders in said company, their successors and assigns, are hereby created and shall forever be a body politic and corporate, by the name and style of the Great Southern Railway Company, and by such name shall be capable in law to purchase, receive, hold, and convey and quietly enjoy lands and tenements, goods and chattels, property of every kind and effects, whatsoever the same may be, and the same to grant, sell, and mortgage, and convey and dispose of, to sue and be sued, to plead and be impleaded, to contract and be contracted with, to make a common seal, and at pleasure to alter or break the same, to ordain, establish, and put in execution such by-laws and regulations as may be deemed necessary and expedient for the government of and for conducting the business of said corporation, not being in conflict with the laws of the United States and of the State of Florida.

SEC. 2. That this company shall have the right to construct, equip, and operate a line of railroad which shall commence at some point at or near King's Ferry on the St. Mary's River, in the State of Florida, which point shall be determined and located by the board of directors of said company, thence to the city of Jacksonville or by way of Jacksonville, thence in a southerly direction, via Palatka, by the most practical route, to the most southern available harbor on the coast or keys of Florida, to be determined by the board of directors; and said company may build and operate such branch road or roads as may be necessary to establish connection with the more remote parts of the State of Florida, and to perfect an important

part of the system of internal improvements in this State.

SEC. 3. That the said company may own and sail steamships and other sea-going vessels in connection with said railroad to any port or ports of the West India Islands and South America, or of the United States, and such line of steamships or other vessels shall be considered to be an integral part of said railroad, and in connection with said road shall constitute one continuous through line for the transportation of freight and passengers between the St. Mary's river and the West India Islands and South America, to be known as the Great Southern Railway Company, and said company shall have the right to construct and operate lines of telegraph on the route of said railroad and its branches, connecting with any shore or cable lines of telegraph said company may establish.

SEC. 4. That the capital stock of said company be ten millions (10,000,000) of dollars, divided into shares of one hundred dollars each. Books of subscription shall be opened within sixty days after the passage of this act, under the charge and supervision of Henry D. Cook, of the City of Washington, and George N. Hubbard and Samuel L. Merrill, of the State of New York, who are hereby appointed commissioners for that purpose, and the said commissioners, or a majority of them who shall act, are hereby authorized and empowered to receive subscriptions to the stock to said company, but said commissioners shall not on their own account subscribe to the capital stock; *Provided*, That said books of subscription may be opened and subscriptions made either in the State of Florida, or in the City of New York, or both. The books of subscription shall be kept open until the whole capital stock is subscribed.

SEC. 5. That when all the capital stock is subscribed, notice shall be given in some newspaper published in Florida and in the city of New York, that a meeting of the stockholders will be held at the time and place designated in said notice, for the pur-

pose of electing directors, who shall be chosen from the stockholders of said company. Stockholders shall be entitled to one vote for each share of the stock held by them, and stockholders may vote by proxy. A majority of votes shall be necessary to constitute a choice of directors. The directors so elected shall continue in office one year, or until new directors are duly elected. The directors so elected shall from their own body choose a president, and in like manner in each and every year the directors and president shall be chosen. Vacancies which may occur in their body between the periods of the annual elections may be filled by said directors; *Provided*, That if, from any cause, there should be no election, the corporation shall not be dissolved, but the directors and other officers then in office shall continue in office with all the powers herein mentioned until the election of new directors shall take place.

SEC. 6. That said directors or a majority of them may make such rules and regulations and such by-laws for the payment of stock, and for all other purposes as they may deem expedient and proper. Said company, may, by their directors, elect and employ all other officers, such as secretary, treasurer, agents, engineers, and superintendent, and discharge them at pleasure.

SEC. 7. That in the construction and operation of said road the said company shall have the right to build all bridges necessary to enable the railroad or any of its branches to cross any rivers or streams; but in crossing navigable rivers or streams, suitable draws shall be constructed to admit and provide for the passage of all steamboats and other water-craft usually navigating such rivers or streams, and said draws shall at all times be kept in good order, and shall be opened whenever necessary to the commerce of said rivers or streams.

SEC. 8. The said company shall have the right and privilege to construct said railroad with a branch road or roads for the transportation of passengers, goods, wares, and merchandise, and

all other articles whatsoever, through any of the lands of the State of Florida; and the right of way is hereby given for the same two hundred feet in width, with the right to take stone, timber, earth, and material, from any lands belonging to the State, in the construction, operation and repair of said railroad and its branches.

SEC. 9. That the president and directors of said company are hereby authorized to contract for and receive conveyances of land, timber, and other materials which may be required by the directors in the construction, operation, and repair of said road, and when the owner and the company cannot agree upon the price, or when the owner is an infant, non-resident, or *non compos mentis*, then it shall be lawful for the president of said company to apply to the sheriff of the county in which said lands are located, who shall summon a jury of three disinterested freeholders, a majority of whom shall be authorized to assess the damages and return their award or judgment to the term of the circuit court of the county in which the said lands or other property may be located, which shall be entered by the clerk as the judgment of the court, and execution may issue thereon for the amount of said judgment and costs. Before proceeding to the discharge of the duties herein required, the jurors summoned shall take an oath or affirmation, to be administered by the sheriff, that they will well and truly inquire into and to the best of their judgment assess the damages to the owner or owners of said land or materials by means of the construction.

SEC. 10. The property so assessed and paid for by said railroad company in conformity with the provisions of this act, and all donations from any source for the same, shall forever afterward belong to and become the property of said railroad company, its successors and assigns, in fee simple in proportion to the number of shares held by the stockholders respectively. Subscription to the capital stock of said railroad company may

be made in land, labor, and material, upon such terms as may be agreed upon by the directors and the owner or owners thereof.

SEC. 11. That the directors of said company shall have the right to demand and receive such prices and sums for fare and the transportation of freight, produce, and merchandise as may be authorized and fixed by the by-laws of said company.

SEC. 12. That in order to promote the speedy success of the public work contemplated by this act, there is hereby granted to the said company, with the consent of the Trustees of the Internal Improvement Fund, the same number of acres of land per mile of the lands known as swamp and overflowed lands, granted to the State by act of Congress of September 28, 1850, as may hereafter be granted to said company by the United States, in aid of the construction of the proposed line of railroad and branches, and the said lands are hereby granted, subject to the provisions of the act of Congress of September 28, 1850, granting the same to the State ; and said lands shall be selected by the said company from those located nearest to the line of said railroad.

SEC. 13. That said company may issue coupon bonds of such denomination and value, and bearing such rates of interest, and payable at such time and places as the board of directors may determine, and may issue such other evidences of indebtedness as the said board of directors may determine, and said bonds and other evidences of indebtedness shall be as a lien or mortgage, first on the road bed, iron, equipment, work-shops, depots, and franchises, both corporate and of use, of the said company, and second on the lands of the said company.

SEC. 14. That Sections 20, 21, 30, 33, 34, 35, 36, 38 and 39,* of An Act entitled an act to provide for the Creation of Corporations and to Prescribe their general Powers and Liabilities,

approved August 8, 1868 are hereby made specially applicable to the said company, for all the purposes of its corporation, and shall be deemed and held a part of this act, and all acts and parts of acts heretofore passed, in any way interfering or inconsistent with this act, in case any rights and powers created thereunder have not vested by law, are hereby repealed.

SEC. 15. That the company shall have succession for ninety-nine years; that no stockholder's property shall be liable for any greater sum than the unpaid amount of stock for which he has subscribed; that this act shall be deemed and held a public act, and the courts of this State shall take judicial notice thereof without special pleading.

Approved February 19, 1870.

* SEC. 20. The stock of every corporation shall be deemed personal estate, and shall be transferable in the manner prescribed in the by-laws or regulations of the company, but no shares shall be transferred until all previous assessments thereon shall have been fully paid in.

SEC. 21. All bodies corporate, as contemplated by this statute, by any suit at law, in any court having competent jurisdiction, may sue for, recover, and receive from their respective members, all arrears or other debts, dues, or other demands which now, or hereafter, may be owing to them, in like manner, mode and form as they might sue for and recover the same from any other person.

SEC. 30. It shall be lawful for any corporation to convey lands by deed sealed with the common seal of said corporation, and signed by the president or presiding member, or trustee of said corporation, and such deed when so executed shall be recorded by the Recorder in the county clerk's office of the county where the land lies in like manner with other deeds, and no further proof shall be deemed necessary to commit the same to record.


SEC. 33. The treasurer or cashier of every corporation shall keep an accurate list of its stockholders, with the number of shares owned by each, which shall at all times upon written application by any stockholder be open to his inspection, and if such officer refuse to exhibit such list, he shall forfeit fifty dollars for each offense, to be deducted from his pay or salary.

SEC. 34. When a majority in number or interest of the members of the corporation desire to close their concerns, they may apply by petition to the circuit court, setting forth the grounds of their application, and the court on due notice by publication for a reasonable period by them given to all parties interested, may hear the matter, and for reasonable and just cause decree a dissolution of the corporation and the corporation so dissolved shall be deemed and held extinct in all respects as if their charter had expired by its own limitation, and the settlement of the affairs of such corporation so dissolved shall be managed as prescribed in cases of voluntary dissolution.

SEC. 35. All corporations shall continue bodies corporate for the term of three years after the time of dissolution from any cause, for the purpose of prosecuting or defending suits by or against them, and enabling them to gradually settle their concerns, to dispose of and convey their property and to divide their capital stock, but for no other purpose.

SEC. 36. No body of persons acting as a corporation under this act, shall be permitted to set up the want of a legal organization as a defense to an action against them as a corporation, nor shall any person sued on a contract made with such corporation, or sued for an injury to its property, or a wrong done to its interests, be permitted to set up a want of such legal organization in his defense.

SEC. 38. Any corporation organized and put into successful operation under this act, shall have exclusive privileges for the purposes of its creation for the term of twenty years from the



date the corporation commences to carry out in good faith the terms of its articles of incorporation; *Provided however*, That this investment shall not so operate as to divest any future Legislature of those powers of government which are inherent and essential attributes of sovereignty, to wit, the power to create revenue for public purposes, to provide for the common defense, to provide safe and convenient ways for the public necessity and convenience, and to take private property for public use, and the like.

SEC. 39. The records of any company incorporated under the provisions of this statute, or copies thereof duly authenticated by the signature of the president and secretary of such company under the corporate seal shall be competent evidence in any court.

GEORGIA CHARTER.

AN ACT

TO INCORPORATE THE GREAT SOUTHERN RAILWAY COMPANY.

WHEREAS, A Company has been incorporated by an Act of the State of Florida for the purpose of constructing and operating a railroad through the entire extent of the peninsula of Florida, from the St. Mary's River on the north, to Key Biscayne Bay on the south ; and also for the purpose of operating a line of steamers across the Strait of Florida, between the southernmost accessible point of the peninsula of Florida to Cuba and the other West India Islands ; *And, whereas*, The opening of a direct connection between such through line to Cuba and the railroads of Georgia, will be of incalculable benefit to this State, by opening across a large and valuable portion of its territory that has hitherto been unprovided with railroad advantages, a grand trunk line between the West India Islands and entire North and North-west ; therefore,

SECTION 1. *Be it enacted by the Senate and House of Representatives of the State of Georgia in General Assembly met, and it is hereby enacted by the authority of the same*, that A. C. Osborn and A. C. Burke of the State of New York ; M. L. Stearns and Horatio Jenkins, Jr., of the State of Florida ; M. H. Alberger of the City of Washington, D. C., and W. P. Rhodes, W. H. Stallings, W. C. Crittenden, L. A. Bond and Samuel Levy of the State of Georgia, and such other persons as may become associated with them by becoming stockholders in said company, their successors and assigns, are hereby created, and shall forever be a body corporate and politic by the name and style of the Great Southern Railway Company, and by such name shall be capable in law to purchase, receive, hold and convey, and quietly

enjoy lands and tenements, goods and chattels, property of every kind and effects whatsoever, necessary to the building, equipping and running said road, and the same to grant, sell and mortgage, and convey, and dispose of, to sue and to be sued, to plead and be impleaded, to contract and be contracted with, to make a common seal, and at pleasure to alter or break the same, to ordain, establish and put in circulation such by-laws and regulations as may be deemed necessary and expedient for the government of, and for conducting the business of said corporation, not being in conflict with the laws of the United States and the State of Georgia.

SEC. 2. That said company shall have the right, and is hereby authorized and empowered to construct, equip and operate a railroad and telegraph line from Millen, in Burke county, in as nearly a straight line as the topography of the country will allow—said line to be determined by a competent Engineer to be appointed by said company—to the St. Mary's River, there to connect with the road of the Great Southern Railway Company of Florida; and said company is hereby authorized and empowered to cross railroads and other roads, and to connect with railroads which it may cross, by switch or otherwise, as the interests of the trade may demand.

SEC. 3. That the capital stock of said company shall be three millions of dollars, (\$3,000,000) divided into shares of one hundred dollars each; but said company may, by a vote of two-thirds of its board of directors, increase its capital to four millions (\$4,000,000) of dollars. Every person holding the stock of said company shall be liable for all assessments or installments that may fall due; and if any assessment or installment is not paid when due, the stock upon such assessment or installment shall be liable to forfeiture to the company, and shall be so forfeited if so declared by a vote of the board of directors, sixty days previous notice having been given in writing to the holder of such

stock. Books of subscription shall be opened within sixty days after the passage of this Act, under the charge and supervision of J. W. Clift, of the State of Georgia, T. W. Osborn, of the State of Florida, and Julius E. Ludden, of the State of New York, who are hereby appointed commissioners for that purpose; and the said commissioners, or a majority of them, who shall act are hereby authorized and empowered to open books and receive subscriptions to the capital stock of said company: *Provided*, That said books of subscription may be opened and subscriptions made either in the State of Georgia, or the city of New York, or in both. Subscriptions may be made to the capital stock of said company in lands, labor or materials, upon such terms as may be agreed upon by the board of directors and the owners.

SEC 4. That when two-thirds of the capital stock is subscribed, notice shall be given in some newspaper published in Georgia, and in the city of New York, that a meeting of the stockholders will be held at the time and place designated in said notice, which place may be either in Georgia or New York, for the purpose of electing directors, who shall be chosen from the stockholders of said company. Stockholders shall be entitled to one vote for each share of the stock held by them, and stockholders may vote by proxy. A majority of votes cast shall be necessary to constitute a choice of directors. The directors so elected shall continue in office one year or until new directors are duly elected. The directors so elected shall, from their own body, choose a President, and in like manner in each and every year the directors and President shall be chosen. Vacancies which may occur in their bodies between the periods of the annual elections may be filled by the directors: *Provided*, That if from any cause there shall be no election, the corporation shall not be dissolved, but the directors and other officers then in office shall continue in office with all the powers herein mentioned, until the election of new directors shall take place.

SEC. 5. That said directors, or a majority of them, may make such rules and regulations and such by-laws for the payment of stock and for all other purposes as they may deem expedient and proper. Said company, by their electors, may elect and employ all other officers, such as secretary, treasurer, agents, engineer and superintendents, and discharge them at pleasure.

SEC. 6 That in the construction and operation of said road the said company shall have the right to build all bridges necessary to enable the railroad to cross any rivers or streams; but in crossing navigable rivers or streams suitable draws shall be constructed to admit and provide for the passage of all steamboats and other water-crafts usually navigating such rivers or streams, and said draws shall at all times be kept in good order, and shall be open whenever necessary for the commerce of such rivers and streams.

SEC. 7. That said company shall have power to cross railroads, and other roads, and to select and take, buy, hold, or receive as a donation, such piece or pieces of land as it may deem necessary for the construction of said road, or the location of its depots or works. And in all cases where the question of the right-of-way arises, or when the said company shall take possession of any land, timber, earth, stones, or other material for the construction or keeping in repair of the same, or any part thereof, and the parties cannot agree as to the value of the damages, the owners thereof shall select a man, and the company shall select a man, who shall be disinterested persons, and, if the two cannot agree, they shall select a third, and the three shall assess the damages to be paid by the said company. The men thus selected to assess the damages shall be sworn to take into consideration an account of the prospective value of the road to the land through or near which it may run. And upon payment by said company of the damages assessed as aforesaid, the fee simple title to such lands, timber, earth, stones, or other material taken, shall vest in the said company: *Provided*, That the right-of-way shall in no case em-

brace more than one hundred feet in width on each side of the track of said railroad, and that the construction of said road shall in no case be hindered, impeded or delayed by reason of any question of damages or unsettled claims.

SEC. 8. That the directors of said company shall have the right to demand and receive such prices and sums for fare and transportation of freight, produce and merchandise as may be authorized and fixed by said company, not to exceed five cents per mile for travel, and one cent per mile for freight.

SEC. 9. That said company are hereby authorized, if it be found necessary for the construction, equipment, or keeping in repair of said road, to issue bonds of such denomination and value, and bearing such rates of interest, and payable at such times and places as the Board of Directors may determine and such other evidences of indebtedness as the said board may determine.

SEC. 10. That said company shall begin the construction of said road within two years after the passage of this Act, and complete the same within ten years.

SEC. 11. That said company is hereby authorized and empowered to unite and consolidate its stock, and road, and franchises, and connect with the Great Southern Railway Company, incorporated under the laws of the State of Florida, to such an extent, and on such terms, as it may deem expedient ; and, in case of such consolidation, such consolidated company shall be invested with all the rights and privileges conferred by this Act, and shall be subject to all limitations and restrictions herein imposed.

SEC. 12. That no stockholder's property shall be liable for any greater sum than the unpaid amount of stock for which he has subscribed ; that this Act shall be deemed and held a public Act, and the courts of the State shall take judicial notice thereof without special pleading.

SEC. 13. That when as much as ten miles of said road is finished and in complete running order, and the Governor is satisfied of that fact, it shall be his duty to place the endorsement of the State on the bonds of said company, for the amount of twelve thousand dollars for every mile then completed, and a like amount for every mile afterwards completed; and the faith of the State shall be bound for the payment of the bonds so endorsed, and shall constitute a lien on said railroad and all its property, real and personal, of superior dignity to any other lien or encumbrance, without regard to date; and all the property of the company shall be vested in the State by such endorsement, so far as to authorize the Government to seize and sell the same for the payment of the bonds thus endorsed by the State, or the interest accruing thereon, whenever the road shall fail to pay the same; and the Governor may, in his discretion, run said road and pay the net profits towards the liquidation of any such debt; and if it should become necessary for the Governor to sell any of the property of said company for the purposes aforesaid, he shall sell the same in such manner, and on such terms, as he may deem best for all concerned. Said company shall not sell or in any manner dispose of the bonds so endorsed for less than ninety cents on the dollar.

SEC. 14. That all laws and parts of laws, heretofore enacted, that effect or are inconsistent with the provisions of this Act, are hereby declared inoperative and void, so far as they effect or are inconsistent with the provisions of this Act.

Approved October 17, 1870.

A BILL

TO AUTHORIZE THE GREAT SOUTHERN RAILWAY COMPANY TO CONSOLIDATE
WITH THE GREAT SOUTHERN RAILWAY COMPANY OF GEORGIA.

SEC. 1. *The People of the State of Florida represented in Senate and Assembly, do enact as follows:* That the Great Southern Railway Company is hereby authorized to unite and

consolidate its stock, road and franchises, and connect with the Great Southern Railway, incorporated under the laws of the State of Georgia, to such an extent and on such terms as it may deem expedient; and in case of such consolidation, such consolidated company shall be invested with all the rights and privileges conferred by this Act, and the Courts of the State shall take judicial notice thereof.

Approved January 24, 1874.

RIGHT OF WAY.

The following act of Congress gives the company the right of way through the public lands of Florida. The act has been complied with. As there are no United States lands in Georgia the act does not apply to that State.

AN ACT

GRANTING THE RIGHT OF WAY THROUGH THE PUBLIC LAND
FOR THE CONSTRUCTION OF A RAILROAD AND TELEGRAPH IN
FLORIDA.

*Be it enacted by the Senate and House of Representatives of the
United States of America in Congress Assembled :*

SEC. 1. That the right of way through the public lands be, and the same is hereby granted to the Great Southern Railroad Company, a corporation created under the laws of the State of Florida, its successors and assigns, for the construction of a railroad and telegraph from the Saint Mary's River, in the State of Florida, to Key West, in said State, together with a branch from the most eligible point on said road to Tampa Bay and Caloosa Entrance in said State, and the right, power and authority are hereby given to said corporation, to take from the public lands adjacent to said road, materials for the construction thereof. Said right of way is granted to said railroad to the extent of one hundred feet in width on each side of the central line of said road where it may pass through the public domain, including

grounds for stations, buildings, work shops, depots, machine shops, switches, side tracks, turn tables and water stations, to an amount not exceeding twenty acres for each ten miles in length of said railroad: *Provided*, That one year from the passage of this act the said company shall file with the Secretary of the Interior, its acceptance of the terms of this act, and a map of the route exhibiting the line of the road and its branches as the same has been located, and shall complete said road within ten years of the passage of the act. It shall be the duty of said company to permit any other railroad, which has been or shall be authorized by the United States or of the said State of Florida, to form running connections with its road, on fair and equitable terms. In case of disagreement, such terms shall be fixed by the Secretary of the Interior.

SEC. 2. That said road shall be a post route and Military road, and Congress at any time, having due regard to the rights of said company, may fix rates of tariff for the transportation of troops, munitions of war and mails, and may add to, alter or amend this act.

SEC. 3. That Congress reserves to itself the right to alter, amend, or repeal this act, whenever in its judgment the interest of the people may demand it.

Approved June 4, 1872.

LETTER FROM SECRETARY OF THE INTERIOR.

DEPARTMENT OF THE INTERIOR, }
WASHINGTON, D. C., 31st May, 1873. }

SIR :

I have received your letter of the 24th ultimo, with the accompanying certified copy of the records of the Great Southern Railway Company, accepting the terms of the act of Congress, approved 4th June, 1872, (17 Statutes, 224,) entitled "An Act granting the right of way through the public lands for the con-

struction of a railroad and telegraph in Florida," and also with a map of the route, exhibiting the line of the road and its branches as the same has been located. This acceptance and this map are filed in accordance with the requirements of the first section of the said act.

I am, sir, very respectfully,

Your obt. servant,

C. DELANO, Secretary.

Secretary of Great Southern R'w. Co.,
Jacksonville, Florida.

CONSOLIDATION.

On the 10th day of November, 1874, in accordance with the power granted by the 11th section of the charter of the Great Southern Railway Company of Georgia; and by the power granted by an Act, supplementary to the charter of the Great Southern Railway Company of Florida the two companies were consolidated under the name and title of the GREAT SOUTHERN RAILWAY COMPANY (CONSOLIDATED).

CHAPTER II.

STATUS IN CONGRESS.

BILL BEFORE THE SENATE ; BILL BEFORE THE HOUSE OF REPRESENTATIVES ; REPORT OF THE SENATE COMMITTEE ; REPORT OF THE COMMITTEE HOUSE OF REPRESENTATIVES ; PETITION TO CONGRESS BY THE CITIZENS OF KEY WEST.

45TH CONGRESS, 2D SESSION.

S. 899.

IN THE SENATE OF THE UNITED STATES.

MARCH 11, 1878.

MR. HILL asked, and, by unanimous consent, obtained leave to bring in the following bill ; which was read twice and referred to the Committee on Railroads.

A BILL

TO AID THE GREAT SOUTHERN RAILWAY (CONSOLIDATED) TO CONSTRUCT A LINE OF RAILWAY IN THE STATES OF GEORGIA AND FLORIDA.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Great Southern Railway Company (consolidated), a corporation duly chartered, organized, and existing under the laws of the State of Georgia and the State of Florida, to construct, equip, and operate a line of railway and telegraph from Millen, in the State of Georgia, to Key West, in the State of Florida, with such branch roads as it is authorized under the laws of the State of Florida to build, shall, for the purposes of this act, and to be enabled to enjoy its provisions, proceed with the construction of said line of railway in such manner as is herein required.

SEC. 2. That the said Great Southern Railway Company (consolidated) shall construct and put in operation at least one hundred miles of its railway and telegraph line aforesaid within eighteen months from the date of its acceptance of this act, and not less than one hundred miles each year thereafter, and complete the said railway and telegraph line within five years, with tracks laid with steel rails of not less than fifty pounds or iron rails of not less than fifty-six pounds weight to the linear yard, and of American manufacture: *Provided*, That within three months from the passage of this act the said company shall file with the Secretary of the Treasury of the United States its acceptance of the provisions of this act.

SEC. 3. That the said Great Southern Railway Company (consolidated) shall be and remain a postal and military route, and the United States shall at all times have preference in the use of the same: *Provided, however*, That the rates of compensation charged for services rendered the government shall in no case exceed the rates charged to private persons for like services.

SEC. 4. That the said Great Southern Railway Company (consolidated) may issue bonds to an amount not exceeding fifteen millions of dollars, payable fifty years after date, in gold coin, with interest thereon at the rate of five per centum per annum, payable semi-annually in gold coin; and the Secretary of the Treasury of the United States is hereby authorized and directed to indorse the guarantee of the United States for the payment of the interest on the said bonds, in the manner and to the extent hereinafter provided; which bonds, when indorsed and delivered to the said company as hereinafter provided, shall, ipso facto, constitute a first mortgage on said railroad, its franchises, road-bed, side-tracks, rolling-stock, and equipment of every kind and character whatsoever, together with the said telegraph line, to secure to the United States and to the holders of said bonds the payment of the interest accruing thereon.

SEC. 5. That whenever and so often as the said Great Southern Railway Company (consolidated) shall have completed ten or more miles of its said railway and telegraph line, the President of the United States shall, upon the written application of the said company, appoint three commissioners to examine the same; and if, upon the report of the said commissioners, he shall be satisfied that ten or more miles of said railway and telegraph line have been constructed in conformity with the provisions of this act, he shall certify the same to the Secretary of the Treasury; upon which certification the Secretary of the Treasury of the United States is hereby authorized and required, upon application being made by said company, to indorse the guarantee of the United States for the payment of the interest upon the bonds of the said Great Southern Railway Company (consolidated) issued under the provisions of this act, and deliver the said bonds so indorsed to the said company: *Provided*, That the indorsement of interest to be so guaranteed by the United States shall be at the rate of fifteen thousand dollars a mile for the section completed. And for each section of ten or more miles thereafter, when completed, the Secretary of the Treasury shall indorse in like manner and to the same extent; and should the last section be less than ten miles, he shall indorse for the same and to the same extent per mile in the same manner; *And provided further*, That the Secretary of the Treasury shall not deliver the said bonds so indorsed until the said company shall have deposited in the Treasury of the United States the sum of one hundred and ten dollars in gold coin for each and every one thousand dollars of said bonds to be delivered at any one time.

SEC. 6. That the said amount of money so to be paid into the Treasury of the United States by the said company shall constitute, and be held by the United States as a sinkingfund to liquidate said bonds at maturity, and shall be invested by the Secretary of the Treasury in the bonds of the United States, bearing interest at the rate of four and one-half per cent. per

annum ; and he shall, from time to time, as it accrues, invest the interest thereon in the same manner, so that the said amount, by thus compounding the interest thereon, shall, at the maturity of the bonds of the said company, be sufficient to pay the same.

SEC. 7. That in addition to the security hereinbefore provided for the payment of the interest on said bonds, the entire amount of earnings of said road and telegraph for and on account of the transportation of troops, mails, munitions of war, supplies, and public stores on and over said road, and for the transmission of dispatches over said telegraph line, shall be retained by the Secretary of the Treasury, and applied to the payment of such interest as far as the same may be necessary for that purpose.

SEC. 8. That if the said company shall fail for one year to pay any installment of interest on such bonds, or any of them, then the Secretary of the Treasury may, if he shall deem it advisable so to do, proceed to advertise, in such manner as he may deem best the said road and equipments and telegraph line so declared to be mortgaged as aforesaid, at public auction, at such place and upon such terms as to payments as he may deem best, and shall by proper conveyance convey the same to the purchaser or purchasers which conveyance shall be deemed to vest in such purchaser or purchasers all the right, title and interest of said company in and to such road, equipments, and telegraph line ; and the money arising from such sale shall be applied to the payment of the interest then due : *Provided, however,* That such purchaser or purchasers shall hold said road and equipments and said telegraph line subject to the payment of interest, and to all the duties and obligations herein imposed on said company.

SEC. 9. That nothing in this act shall be so construed as to impair the rights granted to the said company by the act of Congress entitled " An act granting the right of way through the public land for the construction of a railroad and telegraph

in Florida," approved June fourth, eighteen hundred and seventy-two.

SEC. 10. That Congress may at any time, alter, amend, or repeal this act, having due regard to the rights of said company.

45TH CONGRESS, 2D SESSION.

H. R. 3562.

IN THE HOUSE OF REPRESENTATIVES.

MARCH 1, 1878.

Read twice, referred to the Committee on Railways and Canals,
and ordered to be printed.

Mr. SHELLEY, by unanimous consent, introduced the following bill :

A BILL

TO AID THE GREAT SOUTHERN RAILWAY (CONSOLIDATED) TO
CONSTRUCT A LINE OF RAILWAY IN THE STATES OF GEORGIA
AND FLORIDA.

*Be it enacted by the Senate and House of Representatives of the
United States of America in Congress assembled, &c.*

(The above entitled bill H. R. 3562 is the same in all respects as S. bill 899. On the 18th day of June, the H. R. bill was reported back from the committee by Mr. Shelley.)

IN THE SENATE OF THE UNITED STATES.

JUNE 13, 1878.—Ordered to be printed.

Mr. RANSOM, from the Committee on Railroads, submitted the following

REPORT :

[To accompany bill S. 899.]

The committee on Railroads have considered Senate bill No. 899.

The Great Southern Railway Company proposes to construct a railroad from Millen, in Georgia, through Florida, to Key West, in the Gulf of Mexico, a distance of 870 miles.

The bill proposes that the government shall lend its credit to the company by guaranteeing the interest on bonds, to be issued for the construction of the road. The government is to be secured by a mortgage on the road and all the property of the company. All compensation for carrying the mails and for transportation of all government supplies is also pledged as further security for the government. The company promises to create a sinking fund for the final discharge of the bonds.

It is not deemed necessary to set forth at greater length the further and detailed provisions of the bill.

The consideration that the construction of such a road through Georgia and Florida, to its terminus in the Gulf of Mexico, would be of great benefit to these States ; that it would establish a connection with the principal railroad systems of the country ; that it would shorten communication between the Northern, Western, Middle and Gulf States ; that it would offer new and greatly increased facilities for commerce with the West Indies and Central

and South America, and that it would prove of advantage in time of war, in maintaining our defences in the Gulf, have led the Committee to report the bill back to the Senate for consideration upon its merits.

HOUSE OF REPRESENTATIVES.

35TH CONGRESS, 2D SESSION.

REPORT No. 999.

GREAT SOUTHERN RAILROAD.

JUNE 17, 1878.

Mr. Shelley, from the Committee on Railways and Canals, submitted the following

R E P O R T :

[To accompany bill H. R. 3562.]

The Committee on Railways and Canals, to whom was referred the bill (H. R. 3562) to aid the Great Southern Railway Company (consolidated) to construct a line of railway in the States of Florida and Georgia, having considered the same, report :

That the Great Southern Railroad Company (consolidated) is a corporation duly organized under the laws of the States of Georgia and Florida. The proposed line of their railway begins at Millen, on the Georgia Central Railroad, crosses the Macon and Brunswick Railroad and the Atlantic and Gulf Railroad at Jesup, and runs almost due south the entire length of the peninsula of Florida to Key West, the southernmost point in the United States. It is designed by connecting with the entire railroad system of the United States, to form the shortest and most direct line of communication with the West Indies and Central and South America.

It is represented that the construction of this line of railway will be of great commercial, postal, and military value, and that it will relieve many of the causes of the existing depression in the business and industries of the country.

It is undoubtedly true that we have reached a point at which our natural and manufactured products so far exceed the demand of home consumption that the necessity of seeking foreign markets and entering into competition with the world is forced upon us. Until we can find those outlets for our surplus productions, our industries must remain paralyzed and our people unemployed. Whatever, therefore, promises speedy help or partial relief demands our serious consideration. With this view, we have deemed it our duty to examine carefully into the representations made by the promoters of this railway, especially as to our commercial relations with the countries with which it is designed to bring us in closer contact.

Our people now point with national pride to the fact that in our commerce with Europe we have overcome the balance of trade which has been so long against us, and now export more than we import. The examination which we have made of our commerce with the West Indies and Central and South America reveals facts both startling and humiliating, which demand careful attention. We find that during the five years ending June 30, 1876, our commerce was as follows:

With the West India Islands:

Annual average imports from	\$89,784,525
Annual average exports to	86,944,806

With Central America and Eastern South America;

Annual average imports from	\$66,158,094
Annual average exports to	21,114,854

A total commerce averaging \$213,952,279 a year, which is nearly one-fifth of our entire commerce with the world, and yet it shows an average balance of about \$98,000,000 a year against us.

On the other hand, we find that the commerce of England with these same countries during a period of five years ending December 31, 1874, was :

Annual average imports from.....	\$121,576,058
Annual average exports to.....	117,237,350

A total commerce averaging \$238,813,408 a year, which is greater than ours, and yet her imports were only \$4,000,000 greater than her exports.

We find that Brazil imports annually about \$85,000,000, and of that amount we only sell her \$7,000,000. The Argentine Confederation imports over \$50,000,000 a year, of which less than \$2,000,000 is furnished by us. Cuba, distant only ninety miles from our coast, purchases of us only about \$14,000,000, of her annual importation of nearly \$100,000,000.

Without extending these comparisons further, it is sufficient to say that the same humiliating and disastrous condition of trade will be found to exist with all the West India Islands and South American states. Naturally we might expect to control the trade of this hemisphere. It is therefore astonishing and worthy of inquiry into the causes why England alone should export annually to the countries situated at our very doors nearly \$60,000,000 in value more than we do, or nearly twice as much. We are more astonished at this fact, and it makes it more worthy of our serious attention, when we consider the character of the articles required by the countries named.

None of these countries are manufacturing countries, and their agricultural pursuits, more particularly in the West India Islands, are principally confined to the production of great staple articles for export; consequently food, clothing, and most of the necessities and luxuries of life they import. Naturally, therefore, we find that our leading articles of export to them have been flour, and bacon, and that other principal exports have been butter, cheese, lard, petroleum, coal, drugs, lumber, and cotton fabrics.

Our imports from those countries are principally coffee, sugar, and molasses.

Many causes have, of course, contributed to bring about the condition of trade we have recited, and many elements must unite to change it. It is not our province here to discuss those, but to confine our inquiry to whether this proposed line of railway is likely to produce any beneficial results.

We have seen that the principal articles of our export to those countries are the products of the West; it is also a well-known fact that the West is the great consumer of the articles of our imports from those countries. The problem is to increase the amount of our exports so as to pay for our imports. Shortening the distance and increasing the facilities of communication between the point of production and the point of consumption must of course tend to increase commerce. Our commerce with the countries we are considering is now principally carried on through the port of New York. The products of the West are carried to New York by rail and thence by ocean transportation to the countries for which they are destined. From New York to Cuba involves an ocean voyage of about 1,200 miles. We find that from the Northwest and from the great producing centers of the Mississippi and Ohio Valleys, the distance by rail to Key West is but little greater than to New York, and that Key West is only 90 miles from Cuba. It would appear that the saving of 1,155 miles of ocean transportation would tend to largely increase the export of the articles we are now furnishing, and also open a market for many articles of Western manufacture, such as agricultural machinery, furniture, &c., and for cotton fabrics, the manufacture of which is so rapidly increasing in Georgia.

If by opening close connection and direct communication with the West Indies, we may hope to develop a greatly enlarged market for our products, to wrest from Europe the control of the

commerce of those islands, reduce the balance of trade now so largely against us, and revive the depressed business interests of our country, the proposed line of railway is worthy of serious consideration.

Other considerations are urged in favor of this railway, among which we may mention the development of the great resources of Florida. Large tracts of country in Florida which are now inaccessible, are adapted to the cultivation of cotton, sugar, tobacco, and products which cannot be raised elsewhere in the United States. It is stated that it is the only country, except a few islands on the coast of South Carolina, in which it is possible to raise the sea-island cotton. The rapid destruction of the forests in the Northwest, and the fact that lumber is a large article of export to the West Indies and South America, also make it worthy of attention that this railway would make available millions of acres of the best yellow-pine and live-oak timber.

As far as the direct interests of the government are concerned in the construction of this road it would be in increased mail facilities and its importance for military purposes. In the construction of the enormously expensive forts on Tortugas and Key West we have realized the importance of holding control to the entrance to the Gulf of Mexico, and thereby being able in event of war to guard the mouth of the Mississippi. The ninety miles between Key West and Cuba could be easily held by our Navy if it had a convenient base for supplies and coal. If the occasion should arise, the proposed line of railway would therefore necessarily prove an important element in our means of defense.

The bill provides that the company may issue bonds to the amount of \$15,000 per mile of their road, and they ask the government to indorse the payment of the interest on these bonds. They state that they ask this indorsement by the government for the reason that without that it is utterly impossible to procure the capital to construct any railway, and they claim that the

interests of the government are so directly concerned in having the road constructed, that Congress would be justified by all the commercial and producing interests of the country in granting the necessary aid. A novel feature of the bill is a provision that the company shall deposit \$110 in the Treasury of the United States for each \$1,000 in bonds issued, instead of providing an annual payment for a sinking fund. They claim that as this amount at compound interest would pay the bonds on maturity the liability of the government would be limited to the payment of the annual interest on the bonds, and as security for this the company propose to give the government a first mortgage upon all their property, and leave in its hands all sums of money that may be due them for mail or military transportation.

With this statement of facts we submit the bill for the consideration of the House.

PETITION TO CONGRESS.

SENATOR S. B. CONOVER presented a preamble and resolution adopted at a meeting of citizens of Key West, Florida, in regard to the Great Southern Railway ; which was referred to the Committee on Railroads and ordered to be printed in the RECORD, as follows :

At a meeting of the citizens of Key West, Florida, held at the city hall, May 25, 1878, the following memorial and resolutions were unanimously adopted, namely :

Whereas we, the citizens of Key West, in public meeting assembled, considering the great necessity of more direct and ready communication with the West Indies and the more northern of the South American states, and the fact that the geographical position of the peninsula of Florida, with its level surface and numerous advantages, its line of keys extending to within ninety miles of the coast of Cuba in an unbroken chain, and in almost

immediate contact, presents a most favorable opportunity for the construction of a railroad to supply the required demand, and that such railroad having its terminus at the port of Key West, a point of the greatest military importance commanding, as it does, the entrance to the Gulf of Mexico, is a matter of sufficient general interest to the country at large to justly entitle it to national aid, assistance, and encouragement, and that the vastness of the undertaking renders it necessary to seek such aid: Therefore,

Be it resolved, That our Senators and Representatives in Congress be requested to do all within their power to procure the passage of House bill No. 3562, in aid of the Great Southern Railroad.

Resolved, That the secretary of this meeting be requested to send a certified copy of this memorial and resolution to each of our Senators and Representatives in Congress.

WILLIAM CURRY,

Chairman.

G. BROWNE PATTERSON.

GEORGE D. ALLEN,

Secretaries.

CHAPTER III.

LOCATION OF THE ROAD.

THE LOCATION ; BETWEEN MILLEN AND JESUP, GEORGIA ; BETWEEN JESUP, GEORGIA AND JACKSONVILLE, FLORIDA ; BETWEEN ST. MARY'S RIVER AND TURTLE HARBOR ; BETWEEN TURTLE HARBOR AND KEY WEST ; LETTER FROM HON. STEPHEN R. MALORY ; THE FLORIDA KEYS AND HARBORS OF THE ROAD ; TURTLE HARBOR ; THE MAP.

THE LOCATION.—The line of this railway, as located, and partly constructed, commences at Millen, Georgia, connecting there with the Central Railroad of Georgia, and thence in as near an air line south as the nature of the country will admit, passing through Jesup, Georgia, and King's Ferry on the Georgia and Florida line, and thence, in Florida, through Jacksonville, Palatka, and Orlando ; thence bearing east sufficiently to pass the Everglades, and following the Hunting Grounds to Turtle Harbor ; thence passing to Key Largo and following the line of the Florida Keys to Key West—a length of main line of 720 miles ; a branch road commencing at Palatka and passing by Dade Massacre Field to Tampa Bay and the Gulf of Mexico, midway of the west coast of the peninsula of Florida, a length of branch line of 126 miles.

The company expects to operate its own steamers from the southern terminus of the road to all the principal ports of the West Indies, Central America and South America.

The following reports, by Engineers Smith, Williams and Bailey, the letter of ex-Senator Malory, descriptive of the Florida Keys and of Capt. Patterson, Chief of the United States Coast Survey, give a clear and comprehensive description of the route over which the line of the road runs from Jesup, Georgia, to Key West, Florida.

BETWEEN MILLEN AND JESUP, GEORGIA.—The route from Millen to Jesup, Georgia, 100 miles, is through a high, level and open

pine country, with but one river of importance, the Altamaha, to cross.

BETWEEN JESUP, GEORGIA, AND JACKSONVILLE, FLORIDA.—Engineer C. F. Smith, in his report of the location of the road between Jesup, Georgia, and Jacksonville, Florida, says: “Without entering into details, it will suffice for the present to give the general character of the line as located, particularizing only those points where change in configurations would seem to require a more defined description.

The line beginning at Jesup, where it makes connection with the Atlantic and Gulf, and the Macon and Brunswick railroads, pursues a southerly direction, crossing a tributary of the Finhalloway, near its junction with the main stream, thus avoiding an extensive trestle over the Finhalloway. After slightly curving eastward, passing the head of the Finhalloway, a slight deflection westward brings the line in correct position, passing over the most favorable ground to the Brunswick and Albany railroad, about midway between Waynesville and the Satilla river, thence with slight deflections (its general course being direct) it reaches the Satilla river at Owens Ferry. Crossing the river at this point, and encountering the rice fields of Duncan Clinch, Esq., a curve to the east is made to reach the hard land, thereby avoiding a long and costly trestle. After making a curve southward, the line is brought in proper direction, crossing over a favorable surface to reach the St. Mary's River at King's Ferry. After crossing the river, a slight curve is made westward, thence the line pursues a south course to a point near Callahan, and continuing it to a point about one mile north of Thomas Creek, where a small curve westward gives direction to the line, reaching the Jacksonville, Pensacola and Mobile Railroad, at a point six miles west of Jacksonville, making the entire distance from the Atlantic and Gulf, and Macon and Brunswick Railroads at Jesup, to the Jacksonville, Pensacola and Mobile Railroads, ninety and twelve one-hundredths ($90 \frac{12}{100}$) miles.

The surface of the country over which the line passes, is extremely favorable for railroad construction, necessitating no gradients exceeding forty (40) feet in a mile, and this only in a few instances and for very short distances, no engineering difficulties which are not easily surmounted, (the principal of which are the rivers above mentioned), are encountered through the portion of the route herein reported upon. These are the only points requiring structures of greater magnitude than the ordinary structures of railroads, having sufficient capacity to pass the accumulated drainage during a wet season.

BETWEEN SAINT MARY'S RIVER AND TURTLE HARBOR.—The St. Mary's River, at King's Ferry is deep, admitting vessels of eighteen feet draft from the Atlantic to that point. It is about 350 feet wide, with high banks, which are not subject to overflow.

From King's Ferry to Jacksonville, *via* Callahan, on the Florida Railroad, the projected line of road passes through flat pine land, interspersed with cypress ponds. This land is valuable for cultivation, and the greater portion well timbered with large and valuable pine timber. There are three small creeks to cross, but the crossing is not at all expensive. Upon this section no deep cuts or high embankments will be required, and no grade greater than 20 feet per mile.

From Jacksonville to Middleburg the country is very much of the same character, although the pine timber upon this section has been to a great extent cut off, for the reason that the line of the railroad passes so near the navigable waters of the St. John's River, giving facilities for rafting timber. There are some small creeks to cross, but none of them requiring any expensive work.

Middleburg is situated upon Black Creek, a navigable river, about 250 feet wide, with high banks, which never overflow. From this point to the Bellamy road, west of Picolata, the country is slightly more rolling than the two sections previously de-

scribed. For the most part, the pine land is good and excellently timbered. There are several small branches running into Black Creek, to cross, but a single span of trestle will cross them. The whole of the land, on the line from Middleburg to the Bellamy road, and I may say to Palatka, would be in great demand for the valuable timber upon it, if this railroad was in operation. From the Bellamy road to Palatka the country is very level, with two creeks to cross, each of them about 30 feet wide, with bluff banks.

From Palatka to Orange Springs the country is very level, and the land well timbered ; there are two creeks to cross, but both of them small.

From Orange Springs to Adamsville, the line passes through one of the best populated and most fertile regions of East Florida. It is slightly rolling, but requiring nowhere a higher grade than 60 feet per mile. There is much valuable land upon this line. There is not a stream to cross from Orange Springs, *via* Ocala, to Adamsville. The pine timber is particularly valuable.

From Adamsville the line passes near the foot of the chain of sand hills extending south from the Aha-popka Lake and runs through a flat pine and cypress pond country to Township 30 S. Range 27 E. At this point the line would strike the sand hills, above mentioned, dividing the waters of the Kissimmee and Pease creek. This sand ridge is about four miles wide, but can be easily crossed with a grade of not more than 40 feet per mile, and without expensive excavations and embankments. After crossing this ridge, the line strikes the flat land on the Kissimmee, and the country is almost a perfect level, the balance of the entire route to Turtle Harbor. The pine timber from these sand hills South is not so good, but there is a large quantity of live oak upon the hammocks upon the edges of the prairies of the Kissimmee river. There is also a large quantity of this prairie and Savannah land exceedingly valuable for cultivation, and particularly the cultivation of sugar.

The line, after crossing the Kissimmee, which is a river about 150 feet wide, until it reaches Township 36 S., Range 35 E., would be through the prairies of the Kissimmee. The road-bed would be firm, but perhaps it would require to be thrown up 12 inches. The earth from the side ditches would be sufficient.

From Township 36 S., Range 35 E., *via* Forts Loyd and Van Swearingen, the line runs upon a slightly elevated ridge, dividing the waters of the Okeechobee Lake and the Haipahttokee and St. Lucie river, until it reaches Township 40 S., Range 41 E. There is a large quantity of saw-grass land, the best soil I ever saw, lying East of this ridge, and draining into the above last named rivers, which, with comparatively little cost, could be put into cultivation. There are also many small live oak hammocks in and upon this saw-grass land.

From Township 40 S., Range 41 E., to the Miami River, the line runs on a narrow strip or ridge of pine land lying between the Everglades and the inlets and bays of the Atlantic.

I said before, the country is level, and well adapted to the construction of a railroad—the Hillsboro River, Middle River, New River, Snake Creek, Little River, and the Miami River to cross. But none of these streams will require a trestle more than 200 feet long. Along this line, and upon the rivers and the Atlantic coast, will be, upon the completion of this road, the most attractive country in the South for the cultivation of tropical fruits, coffee, &c., as well as the point of attraction to the very large number of visitors from the more Northern climes to enjoy a tropical winter.

The same narrow ridge of pine land above referred to extremely rocky, of coral formation, but almost perfectly level, continues to Turtle Harbor. All of this ridge is the best tropical fruit country in the United States.

There are, from Fort Van Swearingen, in Township 37 S. Range 37 E., to Turtle Harbor, hundreds of hammocks of the rich-

est land known to our portion of the United States. These hammocks have a large growth of live oak, with other growth unknown elsewhere in Florida. There are also upon this division large bodies of savanna and saw-grass lands (and there can be no lands richer,) which could be cheaply put into cultivation.

The route laid down passes many of the most beautiful inland lakes to be found in the world and the lands are of great value. Every acre of them would have been in cultivation before the war but for their isolation and great distance from communication. Upon no other line of railroad in the United States can a country be reached so rich in its resources for tropical productions, and the value of its pine forest.

Very respectfully,

M. A. WILLIAMS,
Civil Engineer.

BETWEEN TURTLE HARBOR AND KEY WEST.—Mr. Bailey, civil engineer, and Chief Engineer of the International Oceanic Telegraph Company at the time of the construction of that line, surveyed the route for the railway from Biscayne Bay to Key West, along the line of the Keys.

His report shows that the road can be constructed from Biscayne Bay to Key West, at a slight cost per mile above ordinary railroad construction, and for less money than roads average in the cost of construction in New England.

LETTER FROM HON. STEPHEN R. MALORY.—Mr. Mallory was a native of Key West, where he resided till middle life, and was fully conversant with the subject of which he treats. In this we have the practical opinion of a native of Florida, and one who knows well that whereof he speaks. It shows that a gentleman who was once Chairman of the Naval Committee, Senate of the United States, and afterwards Secretary of the Confederate Navy, has published the very best argument for maintaining the maritime supremacy of the United States in its own waters, of

connecting its trade throughout its whole territory, and of connecting its principal cities with the most productive country of the continent by the shortest and safest route. The letter is as follows :

KEY WEST, FLORIDA, May 28, 1871.

MY DEAR SIR :

The practicability of constructing a railroad from this place to Key Biscayne Bay, and thence to a junction with existing railroads of the country, is evident to all who have bestowed attention upon the subject, and its accomplishment would materially shorten the sea travel ; but the question whether existing interests, directly and indirectly involved in its construction, justify the enterprise, is one upon which men may well differ.

Col. Heiss, the able and energetic Superintendent of the International Telegraph Company, has recently completed a *reconnaissance* of the country along the Atlantic Sea Board, from Jacksonville, on the Saint John's River, to the Hunting Grounds, at the Western extremity of Key Biscayne Bay ; and from his report we may safely assume that the entire route between these points is especially favorable to railroad construction, and that it presents no greater obstacles than those surmounted in building the Fernandina and Cedar Key Road. It is well timbered with heavy pine, and well watered, of a uniform elevation above tide water, and the lands generally invite cultivation. Key Biscayne Bay, about six by ten miles in extent, is a beautiful sheet of water, and the Miami and Little River, and other smaller streams, all flowing from the Everglades, whose Southern edge—six feet above tide water—is but five miles from the Bay, flow into it. Settlements have existed on this Bay for a century past continuously, and at present it is attracting the attention of parties wishing to cultivate tropical fruits.

From the main land, from the Western extremity of this Bay, the distance to Key West is 130 nautical miles ; and an air line

between these points would pass over keys which, like beads upon a string, link this Island with the main land of South Florida. The cuts or passes between them are generally shallow and narrow, and there is but one where nine feet of water can be found. They are all above the influences of the sea, and are, with few exceptions, densely covered with timber and a soil susceptible of cultivation. The theory that tropical fruits attain their greatest perfection nearest their northern limit finds its verification here, where the lemon, the lime, the pineapple, the sugar-apple, the sour sop, the sapadella, plantain and banana, are superior to the same fruits of Cuba, and that of the West Indies generally, as is the orange of Louisiana and Florida to that of the more southern latitudes. The agave sisilianna from which the campeche or sisal hemp is manufactured, must soon become an important staple here. It flourishes as does the saw palmetto of the South, or black jack scrub of West Florida, without care or cultivation, and is as equally defiant of all enemies. A good machine for cleaning it is all that is necessary to induce the immediate occupation of all the keys for its production. Many of them possess fine salt ponds, capable of producing millions of bushels, when in dry seasons a superior salt is spontaneously produced, and these will all be utilized under the influence of the suggested railroad.

Could you visit this region, and there are few portions of our country more attractive in winter, you would, I think, recognize the extraordinary advantages of a railroad to Key West, whose capacious harbor the largest ships of war or commerce may safely enter by day or night.

As your chart of this coast may not properly present the chain of islands referred to as lying under an air-line of Key Biscayne Bay to Key West, I will state them from personal observation and a memory tolerably reliable: Beginning at the Bay, we have the Ragged Keys, Soldier Keys, Elliot's Key, Old Rhodes' Key, Key Largo (thirty miles long), Upper Mata Coomba, Lower

Mata Coomba, Long Key, Conch Keys, Grassy Keys, Duck Key, Krall Key, Vacas Keys, Knight Key, Pine Keys (the only Keys with pine barrens), Pigeon Key, Molasses Keys, Bahia Honda Keys, Sumerlin Keys, Sugar-loaf Key, New Found Harbor Key, Saddle Hill Keys, Boca Chica Keys, and Key West.

There are hundreds of other islands of like character lying along the route and varying in extent from 10 to 1000 acres, and nowhere on the globe are fish and turtle found in greater abundance or perfection.

Without special knowledge upon the subject, and without the data at hand for greater accuracy, I can still designate many of the steamships now employed between Cuba and the United States, and which are maintained mainly by the transportation of passengers.

There are seventeen passenger steamers, to which your better information may add, employed between the United States and Cuba, and upon voyages varying in length from sixty hours (between New Orleans and Havana), to one hundred and thirty-two hours (between Havana and New York). The proposed railroad to connect Key West with existing roads in Florida, and thence with the railroad system of the United States, would at once reduce the sea voyage between Cuba and any of our cities to six hours, the distance between Havana and this island from wharf to wharf being ninety miles, and the time between New York and Havana would be reduced from 132 to 80 hours. From a candid consideration of the increase of travel which a reduction of ocean routes and of time, increased facilities and securities everywhere, indeed we are justified in assuming that the opening of this route would double the travel between Cuba and the United States in two years, a result in which every branch of industry and trade in our country is interested. I omit all reference to that immense travel which the completion of the Tehuantepec road and canal (with Panama and other con-

nctions) must induce, and which would mainly pursue this route.

A survey of the route referred to demonstrates the practicability of constructing the road within the ordinary limits of expenditure per mile for railroad enterprises of our country. Not a yard of excavation would be required, and the character of the Islands insures the most substantial of road beds. Under certain conditions the teredo is, perhaps, more active and destructive in these waters than in any others under the American flag; but these conditions could not exist along this route, where piling would be chiefly confined to very shallow depths. An examination of the piles of all wharves here show that the teredo's greatest power is exercised upon piles that stand in the deepest water and strongest currents, and almost exclusively on that part of the pile which marks the average highest and lowest tidal movement; a space of about 26 inches.

But there is a national view of this enterprise apart from the sale of public land, and consequent general development, of paramount interest, and I will rather indicate it than state it in detail. In the event of a maritime war with a strong naval power it is safe to assume that the first general naval action in which we shall be engaged, (assuming that we may have sea-going iron-clads) will be here in the strait of Florida; the actual mouth of the Mississippi. The Gulf of Mexico is, in form, a demijohn on its side, its neck or outlet formed by Cuba upon the South, and Florida upon the North. The distance between Key West and the Captain General's palace in Havana is but 90 miles, a distance which six ordinary steamers may bridge across and communicate with each other every twenty (20) minutes. Nothing could pass even this small fleet unobserved. Through this narrow pass, this mouth not only of the gulf, but of the Mississippi, must come a vast and increasing commerce, and consequently here, beyond all other places upon the deep, would a strong naval power find its most attractive objective point.

We have constructed large works at Tortugas, Fort Jefferson, and a heavy work at Key West. Fort Taylor, at a fabulous expense in recognition of this truth ; and for six or eight months past the harbor of Key West has bristled with monitors and other naval ships, whose presence has doubtless exercised a conservative influence upon even the conduct of Cuban affairs. Unless the location and construction of these forts be a farce and a failure, no man will deny the importance of securing the readiest means of reinforcing and relieving them. All supplies to them now, and the transportation of all troops to this point, are dependent on the risk of a sea voyage of days ; whereas, with the railroad in question established, military and naval reinforcements and supplies would not only reach them without such risks, but would reach them in about one-fourth the time now employed. Is it not fair to assume, therefore, that in this national aspect, would our government regard this enterprise, and that, so regarding it, governmental assistance would advance its construction, with the approval of all political schools.

M.

THE FLORIDA KEYS AND HARBORS OF THE ROAD.

U. S. COAST SURVEY OFFICE.

Washington, July 1, 1878.

HON. JOHN H. MITCHELL,

Chairman Committee on Railroads, U. S. Senate.

SIR,—In answer to the several questions contained in your letter June 17, I beg to state as follows : The distances being in statute miles and the depths at high water unless otherwise stated.

1. The distance from a position on the main land of Florida, say, two miles west of Bay Point at the extreme south western end of Key Biscayne Bay to the town of Key West, is about 115 miles, as a line of roadway would probably run ; of this the aggregate distance between the Keys is about 28 miles.

2. From the first position to Indian Key, a distance of 81 miles, a road would cross but 1,500 yards of shallow water. Near Indian Key is good anchorage in 13 feet of water, with a small inner harbor, into which 7 feet can be carried.

3. From the main land to Indian Key, a road way would cross no deeper water than 12 or 14 feet, except one narrow channel of 17 feet in depth; generally the depth would not exceed 6 feet.

4. From Indian Key to the west end of Bahia Honda Key, a distance of about 45 miles, the depth of water between the Keys runs from 5 to 11 feet, generally, however, less than 7 feet.

5. Bahia Honda is half a mile wide and a mile long, having in these limits no less than 23 feet of water. The depth of 15 feet can be taken up the harbor for 4 miles, and there is a 7 feet channel running through from it between the Keys to the northward and westward.

6. Here it would be necessary to run the road-way around the head of the harbor, in water from 3 to 22 feet in depth, protected from the sea on all sides.

7. From Bahia Honda to Key West, the waters to be crossed by the road do not exceed 5 or 6 feet, and rarely more than 2 feet in depth, entirely protected from the sea.

8. The surface of the bottom between the Keys is composed of fine calcareous sand, mixed with some fine mud, giving generally good "holding ground" to vessels anchoring, but to what depth piles could be driven I cannot say, having no data upon the subject in this office.

9. The average range of the tides along the Florida Keys, from Cape Florida to Key West, is 1.5 feet, and the velocity of the tidal current between the Keys varies ordinarily from $\frac{1}{2}$ mile to 2 miles an hour in accordance with the position and width of the opening. During heavy gales from the southward and eastward, the current rises to the northward and westward, with a velocity varying from 1 to 3 miles per hour, and in the reverse direction with equal velocity during heavy northers.

10. Satilla River, Ga., empties into Saint Andrews Sound. The depth on the bar of this sound at mean low water, is 14 feet; the length of the harbor inside the bar is 8 miles, breadth $\frac{1}{2}$ mile, but the Satilla River is obstructed near its discharge into Saint Andrews Sound by a bar over which but 8 feet can be carried at mean low water.

11. Saint Simons Sound, 8 miles north of Saint Andrews, has 15 feet depth at mean low water on its bar, has large capacity as a harbor, and 18 feet can be carried up for a distance of $19\frac{1}{2}$ miles from the bar, and 6 miles above the town of Brunswick.

12. Saint Mary's River (Fernandina), the depth at mean low water, on the bar of this harbor is $10\frac{1}{2}$ feet. Its capacity as a harbor for shipping is very great, practically unlimited.

13. Saint John's River, the depth at mean low water, on this bar is 7 feet, and although the bars of all the harbors on this part of the coast are subject to changes, these are more frequent on this bar than upon the others named. There is a fine capacity for vessels inside the bar, and a depth of 13 feet can be carried for a distance of more than 60 miles up the river.

14. The mean rise of tide, above mean low water at these several ports is — feet.

15. Turtle Harbor. The character of this harbor is peculiar and quite different from that of any other on the coast. It is well called a harbor, and is really such, although there is no land above water within four miles. It lies between the outer and inner Florida reefs, which surround it on all sides, rising nearly to the surface of the water. It is composed of the harbor proper, and a most excellent and secure outer anchorage, unobstructed by any special bar. This anchorage is a mile in length and half a mile wide, from which two short channels, one of 21 feet and one of 26 feet depth of water, lead into the main harbor $4\frac{1}{2}$ miles long and 1 mile broad, with 26 feet depth of water, and

excellent "holding ground." This harbor is thoroughly protected from the sea on all sides.

Carysfort Light House of the first class is immediately abreast of the harbor, and within three miles of its entrance, which is now marked by a beacon on each side; two more small day beacons, one night beacon, and four ordinary buoys, are all that is required to render this admirable harbor perfectly easy of access at all times in clear weather, without a pilot.

16. Five miles from this harbor a channel of seven feet in depth leads up to a key near the east end of Key Largo, where a perfectly secure landing can be had in smooth water.

17. Key West Harbor is all things considered the best harbor on the south coast of Florida. It has anchorage in 21 feet of water, safe from all winds (except hurricanes) through a length of 4 miles, and a breadth of $\frac{1}{4}$ mile, practically an unlimited outer anchorage in from 30 to 32 feet, with the deep water running close in to the west end of the Key, giving a front of one mile for wharves. A depth of thirty feet can be taken in from the southward and westward; 27 feet from the southward; 26 feet from the southward and eastward, through the reefs; and 12 feet from the northward through the shoals.

18. To the question as to what protection the outer reef would afford "in a military and naval sense," to a railroad running along the Florida Keys, it is difficult to give an answer as the opinions of experts would probably differ in accordance with their temperaments.

The outer Florida reef and the shoal water of the inner, or Hawke's Channel, afford absolute protection to a road against the aggression of iron-clad or other heavy ships of an enemy, and the road could generally be protected by properly constructed gun-boats of sufficiently light draft for the inner waters along the keys. Of course the road would be somewhat exposed to the raids of specially constructed vessels under the command of dar-

ing and skilful officers, but the damage that might be inflicted by a sudden and necessarily short raid could probably be repaired in 48 hours.

19. The greatest, but happily, very rare danger to which such a road would be exposed are the tremendous hurricanes that, say, once in 30 years, devastate those keys. Not only would the trestle-work, founded on piles be probably destroyed, but even the road bed on the islands might possibly be torn up. Vessels are carried and left crushed in the middle of the islands by the terrific seas that surge over them in these awful storms. For all intermediate gales, however, the whole line of the road would, I think, be sufficiently secure.

Yours respectfully,

C. P. PATTERSON,

Sup't. Coast Survey.

TURTLE HARBOR can be entered with 27 feet at all times by steam vessels, and sailing vessels can ride safely at anchor in the outer harbor, until opportunity serves to enter the inner harbor. Depots can be built without difficulty.

The great superiority of Turtle Harbor as a harbor is thus manifest.

Very respectfully yours,

J. E. HILGARD,

In charge of Coast Survey office.

THE MAP.—Accompanying this statement is a map of the line of the Great Southern Railway and its more noteworthy connections.

The company have not only chartered rights for the line of the road, but also corporate rights to own and operate ships propelled by steam, or other power, as an integral part of their line. The principal railroad connections with all parts of the United States, may be seen by the lines of existing railroads. The more important steamship connections which it is intended to make are traced.

Each of the lines so traced will be remunerative as soon as the railroad is completed, and will to a great extent take the place of existing steamship lines from the several terminal points to New York and Europe; the railroad superseding the necessity of the ocean transportation, by its shorter and quicker lines of internal communication. To illustrate: we have 90 miles of ocean transportation from the railroads of Cuba to the railroads at Key West, and 1,245 miles from the railroads of Cuba to the railroads of New York, and Key West is nearer by railroad to Nashville than it is to New York. San Francisco is nearer by railroad to Key West than to New York. All freights and passengers to and from the West Indies, will follow this line, saving not only in railroad transportation, but 1,155 miles of ocean transportation, via New York.

CHAPTER IV.

EXTENSION OF THE ROAD BY STEAMSHIPS.

STEAMSHIP TRANSPORTATION OF THE COMPANY ; AMERICAN AND EUROPEAN STEAMSHIPS TRADING WITH THE WEST INDIES, CENTRAL AND SOUTH AMERICA ; UNITED STATES MERCHANT MARINE FROM 1845 TO 1876 ; DISTANCES OF SEVERAL DOMESTIC AND FOREIGN PORTS FROM KEY WEST ; RAILROADS SOUTH OF THE UNITED STATES.

STEAMSHIP TRANSPORTATION OF THE COMPANY.—The peculiar location of the road of this company, commencing as it does at Millen, near the northern boundary of Georgia, and midway between Canada and Key West, and thence running south, touching at Turtle Harbor to Key West, between 700 and 800 miles, will require the additional transportation of steam and sailing vessels. Key West is sixty miles south of the extreme southern point of the peninsula of Florida, and Turtle Harbor is on the southeast of the peninsula. A full development of the freight and passenger business of the road, requires the continuance of the carriage by steamships south of the termini of the road, to all the ports of the West Indies, of the Caribbean Sea, Central and South America. Elsewhere we have shown the amount of this traffic that will pass over the road from tropical America, from the Panama Railroad and the Darien Canal, as soon as work on it has commenced. But this commerce must be gathered into Key West and Turtle Harbor by steamships and sailing vessels. The company has fully considered this question, and is aware of its importance and the necessity of establishing these lines of steamships.

The nation is now very deficient in steamship transportation on the waters south of the United States, and the entire force of steamers necessary to transact the business would need to be furnished by the company. To fully control the carrying trade

intended to be reached, there will be required at least fifteen steamships ranging from 400 tons upwards. These vessels will be of iron and substantially built. Within two years after the line of road is opened, this number of vessels can be kept fully occupied. This will be more apparent when we consider that there are 107 steamships, registering 163,448 tons, plying regularly from European ports to the same ports that this company intends to reach, and which are now almost wholly or altogether neglected by the commerce of the United States.

From Turtle Harbor there will thus be established with the road, regular steamship connection with Nassau and other ports of the Bahama Islands, with Cardenas and other eastern ports of Cuba, the ports of Porto Rico, Hayti, San Domingo, and each one of the other West India Islands, to the east coast of Venezuela, the steamers on the Orinoco (owned by Americans), the ports of Dutch, French and British Guiana, all the ports of Brazil, the Amazon River, all the ports of Uruguay and the Argentine Republic.

From Key West there will be established connection by steamship with Havana and Matanzas, and at these ports making connection with the entire railroad system of Cuba, and receiving the enormous and valuable freights carried by them, the ports of Jamaica, of Southern Mexico, Yucatan, the Balize, Nicaragua, Costa Rica and the eastern terminus of the Panama Railroad; the Ports of the United States of Colombia, the western ports of Venezuela, and by the Panama Railroad, with the whole western coast of Central and South America. In all more than 150 ports now having a fixed and established commerce. These ports range in the value of their imports and exports from sufficient only to secure the establishment of communication, up to those ranking among the first ports in the world in the value of their commerce. Such is the case with the cities of Havana, Aspinwall, Rio Janero, and Buenos Ayres.

It will be seen by reference to other parts of this book, how enormous is the preponderance of the commercial nations of Eu-

rope, over the United States, in the number and tonnage of vessels and the traffic carried by them. This too, applies both to the main land and the islands of tropical and semi-tropical America. The tonnage and traffic of Europe in this commerce is so much greater than that of the United States, that the realization of it is humiliating to every comprehensive and well thinking American. The interchange in the production of the tropics and those of the temperate zones is almost beyond comprehension, and the successes in commerce and the habits of nations have made this interchange a necessity of civilized life.

The enormous wealth of the mercantile nations of Europe, originally accrued to them, in a large degree, by their commerce with the East Indies and other tropical countries of Asia. It has added to this the commerce of tropical America. The first they still monopolize, the latter nearly so. It will be noticed in the summary elsewhere given of the vessels trading between Europe and the West Indies, Central and South America, that only steamships are mentioned; while the sailing vessels engaged in the same traffic vastly exceed the steamships, in number, tonnage and carrying capacity.

The establishment of this road will call into its service many sailing vessels now unemployed or employed elsewhere. The southern termini of the road being just on the line between the temperate and torrid zones, will afford an opportunity not before existing on this continent for short and profitable trips for sailing vessels, in carrying perishable tropical fruits and other perishable productions of the South.

By the use of refrigerating cars, the most sensitive fruits grown in the tropics can be carried to any point in the North without injury or decay. The greater facilities of ingress, egress and anchorage afforded by the harbors of this road, superior to any harbor south of New York, will afford a great inducement for sailing vessels to engage in the service of the company.

There is another fact in connection with this enterprise that, in a national sense, should not be overlooked. We have shown elsewhere the directness and shortness of this line from the tropics to that portion of the United States north of the Appalachian mountains and west of the Alleghany mountains—that is, the valleys of the Ohio, the Northern Mississippi, and the Northern Lakes. This short line to the tropics would speedily make Chicago, Cleveland, Cincinnati, Louisville, St. Louis, Nashville, and many other cities the rivals of Boston, New York, Philadelphia, Baltimore and New Orleans in importing all the productions of the tropics, and surpass them in exporting the food products of the West to the tropics. Still further, it will cause the Great Basin of the West to become the rival of Europe in the commerce of the nations south of the United States. The construction of this road and its steamship connections is all that is now necessary to turn the commerce of tropical America from Europe to this country and give to the United States what in right belongs to it—the control of the commerce of this Continent. It never has had that control, and it is a duty it owes to itself to seize upon every advantage and secure to itself this commerce of hundreds of millions of dollars per annum. This road, with its ocean extensions, will rescue this commerce from Europe, and for all future time it will be held by this country and by our own people. No public work has been projected, or can be, that will compare with this for controlling so vast a commerce. Indeed, the completion of this road with its steamships added, will revolutionize the commerce of this Continent.

No one of the great national improvements recommended by the XLIII. Congress to be undertaken and accomplished can be compared to this in improving the commerce of the country, or in increasing the material wealth of the people.

To the Company, as well as to the country, to the commerce and to the increasing wealth of the nation, resulting from the

opening of this great trunk line of road as a route of transit for the commerce that will flow from the temperate to the torrid, and from the torrid to the temperate zone, the steamships to be placed in connection with the road, will be of as great importance as the road itself. The steamships will be an actual continuation of the road, to every considerable port south of the United States. It would be but a half completed work if the road was constructed without the addition of the steamships, or if the steamships were put on without the through line of road to rapidly carry the freights from the tropics to the interior of the United States, and *vice versa*. But combined, the enterprise is complete and perfect. All that is claimed for the road will be accomplished speedily upon its completion. The hundreds of millions of dollars of the commerce of the nations south, that now finds its way direct to Europe, will flow into this country and be controlled by it, and the people of the United States made richer by many millions of dollars each year, for all the future.

We need the steamship lines to enable the people of South America, Central America and Cuba to communicate with us and to get the goods they buy direct. As it now is a person from Rio Janeiro, desiring to buy goods in the New York market, would require to go to Liverpool and thence to New York, and the consequence is he buys his goods in Liverpool. This is true of all South American ports. The steamship lines are great highways, and people will travel the roads laid out for them.

England has always been keenly alive to this fact, and has subsidized steamship lines to any part of the earth where there has been even a remote chance of commerce resulting by such communication. But with us it is very different.

The steamship line is simply a continuation of the railroad, the one carrying from the seaboard what the other carries to it. It is of primary importance for our countrymen to see the fact, that

if they wish the people of foreign countries to become our customers, and to buy here in preference to buying abroad, that they must open the way for them to come, and give them at least equal facilities of travel and transportation of freight, as are furnished to them by England and other foreign countries, who are our direct competitors.

AMERICAN AND EUROPEAN STEAMSHIPS TRADING WITH THE WEST INDIES, CENTRAL AND SOUTH AMERICA.—The following American steamers were making trips between Atlantic ports of the United States and ports of the West India Islands, and countries bordering on the Caribbean Sea and the Gulf of Mexico, the year ending July 31, 1874 :

Whole number trips	370
Whole number steamships	47
Total tonnage	65,169

EDWARD YOUNG,

Chief Bureau Statistics.

The following summary of the steamers that were making regular trips in 1874, from the countries designated, to the West Indies and the eastern coast of Central and South America, is taken from the Hamberger Boersen Halle, a financial paper, published in Hamburgh, Germany. The article does not state that all the steamers in this trade are given.

The summary is as follows :

ENGLAND—82 steamers, registering 118,351 tons.

GERMANY—13 steamers, registering 26,617 tons.

ITALY—6 steamers, registering 8,780 tons.

SPAIN—3 steamers, registering 5,200 tons.

HOLLAND—3 steamers, registering 4,500 tons.

Total—107 steamers, registering 163,448 tons.

Adding to the above the steamers from the United States trading with the same countries we have the following :

EUROPE—107 steamers, registering 163,448 tons.

UNITED STATES—47 steamers, registering 65,169 tons.

Total—154 steamers, registering 228,617 tons.

Nothing is said here of the vast number of sailing vessels, the number and tonnage of which no reliable data could be obtained, trading with these same countries. But the aggregate number and tonnage must very largely exceed those of the steamers. The freights carried by the sailing vessels must exceed that carried by steamers many fold.

STATEMENT EXHIBITING THE AMOUNT OF TONNAGE OF THE
UNITED STATES MERCHANT MARINE FROM 1845 TO 1847.

YEAR.	Sail.	Steam.	Total.	Annual in- crease or decrease(—) per cent.
	Tons.	Tons.	Tons.	
1845	2,090,983	326,019	2,417,002	6.00
1846	2,214,192	347,893	2,562,085	6.00
1847	2,434,205	404,841	2,839,046	10.81
1848	2,726,151	427,891	3,154,042	11.09
1849	2,871,621	462,395	3,334,016	5.71
1850	3,010,020	525,434	3,535,454	6.04
1851	3,188,832	583,607	3,772,439	6.70
1852	3,504,200	634,240	4,138,440	9.70
1853	3,802,392	604,618	4,407,010	6.49
1854	4,126,295	676,607	4,802,902	8.96
1855	4,441,716	770,285	5,212,001	8.52
1856	4,198,576	673,077	4,871,653	2.60
1857	4,235,059	705,784	4,940,843	1.41
1858	4,321,418	728,390	5,049,808	2.2
1859	4,376,285	768,753	5,145,038	1.90
1860	4,485,931	867,937	5,353,868	4.06
1861	4,662,609	877,204	5,539,813	3.47
1862	4,401,701	710,463	5,112,164	— 4.51
1863	4,579,537	575,519	5,155,056	0.84
1864	4,026,065	960,335	4,986,400	— 3.85
1865*	1,212,805	367,189	1,570,994	} 2.21
1865†	2,816,838	699,950	3,516,788	
1866*	2,442,212	926,267	3,368,479	} —15.42
1866†	785,254	157,045	942,299	
1867*	2,834,535	1,122,980	3,957,515	} — 0.12
1867†	278,072	68,900	346,972	
1868*	3,118,895	1,199,415	4,318,310	} 1.10
1868†	33,449	.....	33,449	
1869*	3,041,083	1,103,568	4,144,641	— 4.76
1870†	4,171,412	1,075,095	4,246,507	2.46
1871	3,194,970	1,087,637	4,282,607	0.85
1872	3,326,194	1,111,553	4,437,747	3.62
1873	3,539,584	1,156,443	4,696,027	5.82
1874	3,615,042	1,185,610	4,800,652	2.23
1875	3,685,064	1,168,668	4,853,732	1.16
1876	3,107,086	1,172,372	4,279,458	—11.83

* New measurement.

† Old measurement.

‡ New from 1869.

**DISTANCE OF SEVERAL DOMESTIC AND FOREIGN PORTS FROM
KEY WEST.**

U. S. COAST SURVEY OFFICE,
WASHINGTON, August 23d, 1877. }

Dear Sir:

By request I send you a table of distances asked for. * *

By direction of the Superintendent.

J. E. HILGARD,

Assistant Coast Survey in charge of Office.

Distance from Key West to the various ports of the United States, Cuba and other countries in nautical miles:

	MILES.
Key West to Savannah, Ga.	557
“ “ Charleston, S. C.	582
“ “ Baltimore, Md.	1090
“ “ Philadelphia, Pa.	1122
“ “ New York.	1155
“ “ Boston, Mass.	1372
“ “ Havana, Cuba.	90
“ “ Matanzas, “	92
“ “ Cardenas, “	103
“ “ Kingston, Ja.	726
“ “ Cape Hayti.	610
“ “ San Juan, Porto Rico.	955
“ “ Saint Thomas.	1025
“ “ through Mona Passage to Guadalupe (Bassa Terre).	1252
“ “ through Mona Passage to Barbadoes (Bridge- town).	1447
“ “ through Mona Passage to Trinidad (Porto España).	1461
“ “ through Mona Passage to Aspinwall.	1080
“ “ Greytown or San Juan del Norte.	974

"	"	Sisal.....	493
"	"	Vera Cruz.....	869
"	"	Tampico.....	840
"	"	Georgetown (British Gui).....	1762
"	"	Paramariba (Dutch Gui).....	1917
"	"	Cayenne (French Gui).....	2082
"	"	Mouth of Orinoco.....	1600
"	"	Maracaibo.....	1140
"	"	Puerto Cabello.....	1237
"	"	Mouth of Amazon.....	2455
Key West to Bahia.....			3910
"	"	Pernambuco.....	3535
"	"	Rio Grande do Sul.....	5322
"	"	Rio Janeiro.....	4600
"	"	Buenos Ayres.....	5720
"	"	Montevideo.....	5612
From Panama to Callao.....			1770
"	"	to Cobija.....	2132
"	"	to Valparaiso.....	2640
Sand Key Light at Key West, to Moro Light, Havana....			82.3

RAILROADS SOUTH OF THE UNITED STATES, 1865.

Countries and States.	Miles of Railroad in operation.
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CENTRAL AMERICA AND WEST INDIES.

Honduras,	66
Costa Rica,	29
Panama,	49
Cuba,	427
Jamaica,	34
Barbadoes,	6
<hr/>	
Total Central America, &c.,	611

SOUTH AMERICA.

Colombia,	43
Venezuela,	39
Guiana (British)	68
Brazil,	837
Paraguay,	47
Uruguay,	197
Argentine Republic,	994
Peru,	972
Chili,	629
Total South America,	<u>3,826</u>
United States of Mexico,	<u>327</u>
Total Railroads South of the United States,	<u>4,764</u>

CHAPTER V.

CONNECTIONS.

PANAMA RAILROAD; RAILROAD CONNECTIONS; SAINT JOHN'S RAILROAD; JACKSONVILLE, PENSACOLA AND MOBILE RAILROAD; FLORIDA RAILROAD; BRUNSWICK AND ALBANY RAILROAD; JESUP; ATLANTIC AND GULF RAILROAD; MACON AND BRUNSWICK RAILROAD; CENTRAL RAILROAD OF GEORGIA; AUGUSTA BRANCH; GENERAL RESOURCES FOR THROUGH FREIGHTS AND PASSENGERS; RIVER CONNECTIONS; ALTAMAHA; SATILLA; SAINT MARY AND ST. JOHN'S.

PANAMA RAILROAD.—The avenue of communication with the West Coast of Mexico and South America, is now by the Panama Railroad. By this line more than half the distance from New York to Aspinwall can be made by rail. A vast business, therefore, with the West Coast of America, will enter the United States by this line.

RAILROAD CONNECTIONS.—This Railway constitutes a continuous line from Millen, Georgia; there connecting with the north and south roads from New York city terminating at Millen, half way from New York city to Key West, the extreme Southern key of Florida, and southern most point of the United States. At this point communication is secured with the entire Railroad System of Cuba, by a ferrage of 90 miles across the Strait. In other words, the present water communication of 1,155 miles to New York is reduced to a day-light passage of 90 miles; the remainder of the trip being on a north and south railroad, and made in a small fraction of the time now required. The beauty of the country and the salubrity of the climate through which this line passes is more fully mentioned elsewhere, as well as the vast commerce and wealth that is tributary to the road, from the Peninsula of Florida, from Cuba, from all the other West India Islands, from Central America, and from South America. It can have no competition, and by the laws of commerce, must be financially successful.

The military, naval and postal value of the work, elsewhere alluded to, cannot be over-estimated. In these departments the government will largely patronize the road in time of peace, and in time of war or threatening hostilities with any power, the government will save millions of dollars in rapidity of transportation and safe inland communication to the Keys, the naval and military stations at Key West and the Torgugas and the passage to the Gulf, and have the military and naval depots always accessible and always protected.

Too much attention cannot be given to the advantageous location of the road relative to all other roads which it crosses, or with which it connect. Had every one of the eight roads with which it has immediate connections been constructed originally with the view of being made especially available for the benefit of this road, they could not have been more happily located.

ST. JOHN'S RAILROAD.—Commencing with the most southern of the roads tributary to this one in Florida, we have the Saint John's Railroad, from St. Augustine the oldest city in the United States, and a famous watering place, to Tocoi. The road is completed, is sixteen miles in length, and can make connection with no railroad but this.

JACKSONVILLE, PENSACOLA AND MOBILE RAILROAD.—The next road north is the Jacksonville, Pensacola and Mobile Railroad. It is crossed by this railway at its eastern terminus, Jacksonville. This road is now completed and in operation to Chattahoochie, 250 miles. When completed it will be the most southern, east and west trunk line, nearest the Gulf coast, and by existing lines and those in process of construction, continuous to the Pacific coast, and on the same parallel of latitude.

FLORIDA RAILROAD.—The next road still to the north is the Florida road, 156 miles in length, and is completed. This road runs northeast and southwest across the Peninsula of Florida, from the port of Fernandina on the Atlantic Ocean to the port of

Cedar Key on the Gulf of Mexico. The line of this railway crosses the Florida road at Callahan, twenty-five miles from Fernandina, and is the only outlet for the Florida road to the North. Indeed the location of the Florida road is such that it must necessarily throw almost its entire business upon this, and become practically a completed extension or branch of it, 156 miles in length, with two good ports, one on the Atlantic Ocean and one on the Gulf of Mexico.

BUNSWICK AND ALBANY RAILROAD.—The next road to the north is the Brunswick and Albany Railroad, already completed 240 miles from Brunswick, a magnificent harbor on the Atlantic coast of Georgia to Albany. The continuation of this line to a connection with the railroads in central Alabama is now in progress. This road, being an East and West road, will be tributary in a large degree, by carrying freight and passengers from the East and West to this road, for southern market or travel. It will also be one of the main lines to receive freight and passengers from the South, for central Georgia, Alabama, Mississippi and the west. The Brunswick and Albany will in every way be advantageous to this road, as regards both passengers and freights.

JESUP.—The next railroad crossing still to the north is at Jesup. Here this Railway cross two railroads—the Atlantic and Gulf, and the Macon and Brunswick—at their present crossing, thus bringing the three roads together at Jesup, the most flourishing town in Southeastern Georgia.

ATLANTIC AND GULF RAILROAD.—The Atlantic and Gulf Railroad, running from Savannah, on the Savannah River, to Bainbridge and Albany, in Southwestern Georgia, a completed road three hundred and forty-four miles in length, traverses the State of Georgia in a Northeast and Southwest course, and will be tributary in passengers and freight from Savannah to Florida, and vice versa. The line of this road, Southwest of Jessup, will in the same manner, and to a large extent be tributary to that

portion of this road north of Jessup, in all direct travel and traffic with all the states north of that point. The distance saved over the present route, via Savannah to Millen, is one hundred and fifty miles. Thus the location of the line of this railway diagonally across the Atlantic and Gulf Railroad, makes the latter road northeast of Jesup one of its principal patrons in the commerce of the through line south, while that portion southwest of Jesup becomes one of its chief patrons for the commerce north.

MACON AND BRUNSWICK RAILROAD.—The Macon and Brunswick Railroad, crossing the Atlantic and Gulf Railroad and this Railway at Jesup, is a completed road in operation, commencing at the Port of Brunswick, on the Atlantic coast of Georgia, and thence running Northwest to Macon 195 miles. This road is a first-class tributary to this Railway, indeed as much so as the Florida road. All travel of passengers and all transportation of freight from the portions of the road east of Jesup, bound north to the City of New York, and elsewhere in the Northern and Eastern States, will take this railway north of Jesup, it being a saving to Millen and the North of 150 miles.

The portion of the Macon and Brunswick Road west of Jesup operates as a branch of this Railway, it being the shortest line from the South to the Northwest, the connections by this line being perfect, and on an airline to the Northwestern States. Cars by this line can be run from Key West to the cities of Nashville, Louisville, Memphis, Cincinnati, Saint Louis, Chicago, and all other cities of the West, without breaking bulk, and on the shortest line. The value of the connection, and the facilities thus offered, cannot be overestimated when we consider the vast quantities of tropical fruits from Florida, the West Indies and South America, which will seek the markets of the North and West over these lines of quick transportation, and with little handling, to reach a market with so perishable freight. All travel of passengers and transportation of freight from all the Northwestern

States to the Peninsula of Florida, and to the West Indies and South America, will use this line, it being by far the shortest and most convenient.

It is mainly on this line that the heavy freights from the tropics will leave this Railway for the Northwest. By reference to the map, it will be seen that the shortest railroad communication to all the Northwestern and Western States, by which Sugar, Molasses, Coffee, Indigo, Spices, Cocoa, Fruits, and numberless other tropical products, can be transported is by this Railway and the Macon and Brunswick Railroad and its connecting lines. By this line the freights from Cuba and the other Southern countries are as near Tennessee, Kentucky, and all the States to the West and Northwest of these, before they leave Havana, as they are at New York, after the expense of 1,155 miles of ocean transportation, the handling and storage in New York.

The same statement holds good for different sections of the country, via the Jacksonville, Pensacola and Mobile Railroad, by the Brunswick and Albany Road, and especially so via the Millen and Augusta branch of the Central Railroad of Georgia, over which the States of South Carolina, North Carolina, Virginia and West Virginia will be supplied with freights from the tropics.

CENTRAL RAILROAD OF GEORGIA.—The next Railroad still North of Jesup, with which this Railway connects is the Central Railroad of Georgia, at Millen, the Northern terminus of the Great Southern. The Central Railroad of Georgia is a completed road 541 miles in length, from Savannah to Macon, with a branch from Millen to Augusta, and with other branches and extensions under the same ownership. This road to the West gives an outlet for all of Northern Georgia, Alabama and Tennessee. The many large cities of the Central States are brought into close and direct communication with the tropics by the Western extension of the Central Railroad of Georgia and this Railway, by the shortest line of transportation.

AUGUSTA BRANCH—But of all the roads yet mentioned, the branch of the Central Railroad of Georgia, from Millen to Augusta, is of greatest importance to this Railway. It runs due North, from Millen to Augusta, 53 miles, and there unites with all the North and South Railroads between the Blue Ridge Mountains and the Atlantic Ocean. There are thus made complete north and south connections with the States of South Carolina, North Carolina, Virginia, West Virginia, Pennsylvania, Maryland, Delaware New Jersey, New York, the New England States and the Canadas. By this complete connection all these States, the large cities and the 20,000,000 people in them, are brought into the closest possible communication with the West Indies and the tropics. Passengers can pass from the extreme north to the extreme south without weariness. The most delicate of tropical fruits and the productions of Tropical Florida and the West Indies can be taken to the north by the most rapid transit. The immense losses now incurred by decay on the long ocean voyage will be avoided. Vast quantities of vegetables and fruits are now grown in Virginia and North and South Carolina in advance of the season at the North, and delivered in Northern markets in March and April, and upon the opening of this line they will be grown in still greater quantities in Florida and Cuba, and delivered in New York in December, January and February. The fruits of the tropics will be nearly as frequent in the northern markets and upon the table of every family as the northern productions are now. The season of garden vegetables and fruits, instead of being as now confined to the summer and autumn, will extend over the whole year, and instead of being confined to the productions of the north, will cover as well the productions of the tropics. No part of Europe has such facilities for bringing the productions of the temperate and torrid zone together, fresh in one market, as this road will give to the people of this country.

The unprecedented facilities this Railway, with its favorable connections, offers to the passenger travel may be minutely in-

vestigated. The people continually passing south and north in the United States will find by this line all that can be desired to reach the southern limit of this country, and the greatest convenience to pass into the West Indies and South America and *vice versa*. The climate of the peninsula of Florida does now, and must always, offer to persons suffering with pulmonary diseases the best asylum in the world. The climate, for salubrity and healthfulness, surpasses that of Italy, and the scenery is no less agreeable and fascinating.

This Railway, by reason of the directness of its line, the rapidity of transit by it, and its most remarkable and advantageous railroad connections, will secure over its 720 miles of road all express matter and fast freights. No combination of capitalists or of corporations can change this, for practically the peninsula of Florida can be traversed by no other road.

GENERAL RESOURCES FOR THROUGH FREIGHTS AND PASSENGERS. — The island of Cuba contains 1,800,000 people; the West India islands together about 4,000,000. Eleven per cent. of the entire commerce of the United States is with the West Indies. Central and South America are also in a great measure tributary to this Railway, by reason of this being the shortest water communication to reach the Railroad system of the United States. These countries together contain 44,000,000 of people. From these sources—the West Indies, South America and Central America—the United States has more than twenty per cent. of its entire commerce. In all this traffic no railroad can compete.

With these resources of half a continent tributary to this Road from the South, we have connections on the line itself with eight railroads, none of which could have been more advantageously located for branches and feeders. By the several roads we have complete railroad connections with every part of the United States and Canada, and will draw from the commerce of every State

in the Union, and will carry the passengers and freight down one only trunk line of railroad of 720 miles to the strait of Florida. Cars may be loaded at any point in the United States, and without breaking bulk and without delay, be run to and over the entire length of this Railway to the door of Havana, the mart of the West Indies, and to the gateway of South America. If it were possible that so long a road as this could be constructed and made dependent upon the patronage of other railroads alone and upon through traffic of fast freights and passengers, no line in America could equal this. The freights and passengers that must of necessity be thrown upon it from other roads will make it one of the best lines in America.

RIVER CONNECTIONS.—Besides the many connections this Road will have with other railroads, it has valuable connections in crossing the several navigable rivers which run perpendicular to the line of the road, and which will bring to it large amounts of cotton, of general freights, and immense amounts of lumber.

ALTAMAHA.—The most northern of these rivers is the Altamaha, which is crossed by the road eighty miles below Millen, and one hundred miles from the mouth of the river. The Altamaha is formed by the junction of the Oconee and Ocmulgee. There are thirteen feet of water over the bar of the river at ebb-tide. The junction of the Oconee and Ocmulgee is about one hundred miles above the railroad crossing. The Oconee is navigable to Milledgeville, and the Ocmulgee to Macon. There are six hundred miles of the navigable waters of the Altamaha and its tributaries above the crossing of the road. The banks of the Altamaha, the Ocmulgee, and the Oconee, are covered the entire length, either with cotton and rice plantations, or by the finest yellow pine and cypress forests in the world. This north and south road will secure more of the traffic of these rivers than any other.

SATILLA.—The next considerable navigable river south of the Altamaha is the Satilla River, fifty miles south of the Altamaha.

The road crosses this river forty miles from the ocean. The course is through a rich and well-timbered country. Many valuable and highly cultivated Sea Island cotton and rice plantations are on it. These are very productive, and the cotton and rice produced is of the finest quality. There are many extensive lumber mills on the river. The road crosses at Owen's Ferry. The entire length on each bank, not occupied by plantations, is covered with splendid yellow pine and other timber, most valuable for building and manufacturing purposes.

ST. MARY'S.—The next considerable river on the south is the Saint Mary's—the boundary line between Georgia and Florida. The road crosses at King's Ferry thirty miles from its mouth. The depth of water on the bar admits the passage of ships drawing sixteen feet. The river has an excellent channel, with sixteen feet of water to Trader's Hill, thirty miles above the railroad crossing, and twelve feet fifty miles higher. The collection ports of St. Mary's, Georgia, and Fernandina, Florida, are both on this river, and are fine towns and of large business interests. The town of Coleraine, near the railroad crossing, is a fine village. Traders' Hill, at the head of navigation, is a thriving village. The lumber and timber business is very extensive. The banks of the Saint Mary's are high and the country beautiful. The business accruing to the road from the Altamaha, Satilla and the Saint Mary's Rivers will be large, and the road in this business has, and can have, no rival.

SAINT JOHN'S RIVER.—Thirty miles south of the Saint Mary's the road touches the Saint John's River at Jacksonville. This city is a port of entry, has 20,000 inhabitants, and in business and enterprise has no superior in the country. The Saint John's River runs due north, and enters the ocean twenty-five miles from Jacksonville. South of Jacksonville it has, with its tributaries, more than 600 miles of navigable waters, and a rapidly increasing population on its banks. It traverses the most delightful coun-

try and climate in America. This road connects the Saint John's River, and all the country tributary thereto, by an air line, with the Northern and Northwestern States. Jacksonville is one of largest lumbering towns in the South.

CHAPTER VI.

GEORGIA.

AREA OF THE STATE; CENSUS OF 1870; EASTERN GEORGIA; ADVANTAGES OF THE POSITION OF GEORGIA; WATER SHEDS; EXTERNAL AND INTERNAL RELATIONS OF GEORGIA; COMMERCIAL SITUATION, BEST SITE ON THE CONTINENT; EFFECTS OF THE LATE WAR; VIEW OF THE FUTURE; IMMIGRATION; GENERAL VIEW OF THE SITUATION, AND CONDITION OF THE STATE; VARIETY OF PRODUCTS; MANUFACTURING PRODUCTIONS.

AREA OF THE STATE.—Georgia with the exception of Florida is the largest State east of the Mississippi; and since the dismemberment of Virginia, the largest of the original 13. The area of the State, prior to 1802, when she ceded her western territory to General Government, exceeded 150,000 square miles, including the greater portions of the States of Alabama and Mississippi: viz., 46,200 square miles of the former, and 41,856 square miles of the latter. The precise present area is not accurately known—the coast and river lines being very irregular. It is generally given as 58,000 square miles, or 37,120,000 acres, which is probably below the true area. The greatest length of the State is from north to south, 320 miles; and breadth, from east to west, 254 miles. The geographical centre of the State is in Twiggs County, near Jeffersonville, about 20 miles south-east of Macon.

CENSUS OF 1870.—The return of the value of taxable property in this State for the year 1870, being the last made, is:

Aggregate value of land.....	\$95,600,674
City and town property.....	47,922,514
National Bank shares	985,900
Money and solvent debts.....	26,646,995
Merchandise	12,834,118

Shipping	214,775
Stocks and bonds.....	5,482,765
Cotton manufactories.....	2,985,498
Iron works, etc.....	658,026
Mining,.....	33,140
Value of household and kitchen furniture	1,519,857
Plantation and mechanical tools	162,859
Value of all other property	30,933,568

Making a total value of all property of. . . . 225,980,689

EASTERN GEORGIA.—That portion of Georgia between Millen and the Saint Mary's River, and immediately contiguous to the road, embraces 16 counties, and contains 131,871 inhabitants.

The following statistics are from the Census Report of 1870:

Farms, acres improved.....	617,533
“ “ unimproved.....	3,236,316
Cash value of farms.....	\$8,716,730
Estimated value farm products	7,944,515
Cash value live stock	3,408,993
Bushels corn.....	1,331,988
“ oats.....	239,837
Bales cotton.....	30,610
Pounds wool.....	140,156
Bushels sweet potatoes.....	475,882
Pounds rice.....	21,734,008
“ butter.....	146,488
Gallons molasses.....	121,644
Pounds honey.....	55,311
Forest products	801,559

ADVANTAGES OF THE POSITION OF GEORGIA.—Upon an impartial comparison of natural advantages, the position of Georgia, her external relations to commerce, and her facilities for intercourse,

trade, and travel, are unsurpassed. To their complete development, a less expenditure of funds, public or private, than has been required for other developments incapable of the same completeness, would suffice. By nature, neither the Erie Canal nor the Chesapeake and Ohio, neither the Pennsylvania Railroad, the Baltimore and Ohio, nor the Chesapeake and Ohio, possess such admirable advantages; yet these artificial channels, prepared at enormous expense, have given the advantages of prepossession to other States and sections. The natural advantages may yet assert themselves, and the whole country is filled with population and capital, and when competition for trade become close and keen.

Resting upon the Atlantic, Gulf, and Mississippi slopes, Georgia, were her resources properly developed, occupies the mouth of the great funnel through which might pour the wealth of the continent—herself capable, by the finest combination of natural gifts, of a most perfect and systematical internal development.

WATER SHEDS.—The chain of mountains which separates the Atlantic from the Gulf slopes, is of various widths, extending even to 100 miles across; but there is a narrow, absolute line, irregular and tortuous, yet never broken, which is the culminating ridge, and which winds its way, at different levels and in different directions, from Cape Gaspé in Canada, to Cape Sable at the southern extremity of Florida. This long, unbroken line, without width, separates the waters flowing into the Atlantic direct, from those flowing into the St. Lawrence and the Gulf.

The principal ridge entering Georgia from North Carolina, passes through the very heart of the State and runs to the southern extremity of Florida—all the waters east of it flowing into the Atlantic; those west, into the Gulf.

EXTERNAL AND INTERNAL RELATIONS.—The exact situation of Georgia or any other State, either in the Union or on the earth's surface, is not often comprehended by readers.

The bare statement of latitude and longitude makes but little impression, especially of the relative situation. The figures for Georgia, however, are as follows—viz. : Between latitude $30^{\circ} 21' 39''$ and 35° north, and longitude $80^{\circ} 50' 9''$ and $85^{\circ} 44''$ west of Greenwich—nearly one fourth of a full circumference west of England. The National Observatory at Washington City is $77^{\circ} 02' 48''$ west of Greenwich, and the longitude of Georgia referred to Washington, is between $3^{\circ} 47' 21''$ and $8^{\circ} 42'$ west. The difference in time, between the eastern and western extremities of the State, is not quite 20 minutes. The latitude and longitude of Atlanta, ascertained by the United States Coast Survey for the flagstaff on the Capitol, are, latitude $33^{\circ} 45' 19.8''$, longitude $84^{\circ} 23' 29.7''$.

Latitude is much more significant in its bearings than longitude, largely affecting climate and productions. Georgia lying between 30° and 35° north, the sun, at the summer solstice, lacks but 8° of being vertical on her southern border. The difference of latitude between the two borders—say $4\frac{1}{2}^{\circ}$ —is greater than in most of the States, the greatest length being north and south ; and the corresponding difference of climate and productions is augmented by the fact that the most northern part of the State is also the most elevated. These circumstances taken together make a remarkable range of production.

The Southern States occupy the south-east corner of the United States, and Georgia is nearly in their south-east corner—Florida occupying it exactly.

COMMERCIAL SITUATION—BEST SITE ON THE CONTINENT.—Georgia, it will be observed, is the keystone of the arch formed by the grand curve of the Atlantic States on the one side, and the Gulf States on the other.

The best commercial site on the continent is undoubtedly in North America—not South. It must be found on the Atlantic—not on the Pacific, which is too remote. It must not be on

the Gulf Coast, which has a difficult navigation, but on the Atlantic, fully open to the sea. The determining criterion is the trade of the Great Mississippi Valley. Every Atlantic State has ample facilities for its own immediate trade. The decisive criterion of the best commercial site is the relative adaptation for the trade of the Great Valley. Georgia occupies this position. Geographically she is on the shortest line ; topographically, on the most feasible ; climatically, on the line least obstructed by ice.

This fine position nature has assigned her by placing her below the great Appalachian chain, which more than a Chinese Wall separates the ocean from the Great Valley. This "backbone of the Continent" rising in Canada, terminates in Alabama and Georgia. Here for the first time the "endless"—the Indian meaning of Alleghany—finds an end and opens a gate for commerce on the shortest line from the heart of the Valley.

Take the Mississippi Valley as the centre of the Continent, and the junction of the Mississippi and Missouri Rivers at St. Louis as the heart of the valley : from this centre the nearest Atlantic coast is the sea-coast of Georgia. With one end of the compasses at the junction, the arc with the least radius will touch the Georgia coast. Or take Cairo, at the mouth of the Ohio River, and the case is still more marked. Even from Louisville the observation is still true ; while from Cincinnati the length of the line is nearly the same, and really, in view of the intervening obstacles, the shortest practicable line. The critical position of Georgia becomes more and more manifest by careful study of the map. Of the three great slopes, the Atlantic, the Gulf, and the Valley slope, Georgia is the only State of the Union which impinges upon each. The head-waters of the Savannah, the Chattahoochee, and the Tennessee flow from a point within her borders.

Nearly all the rivers of all the other Atlantic States flow in parallel directions south-east into the ocean. Georgia rivers from the central point referred to, flow as radii south-east, south, and south-west, and, as if nature was not content to do things by halves, the Tennessee River, emptying in the Mississippi, bends, with an elbow almost projecting into Georgia, accommodating itself to the natural opening.

The immense importance of the Valley trade has been long and fully appreciated. In every part of the course of the long mountain chain, every weak point has been carefully examined as a passway for the trade. Beginning in New York and coming south through Pennsylvania, Maryland, Virginia, and North Carolina and Georgia, every opening has been criticised and essayed. The success of De Witt Clinton, in opening this navigation at heavy expense, laid the foundation of the commercial prosperity of New York, which sprung immediately ahead of Philadelphia and other rivals.

General Washington made strenuous and protracted efforts to make the Potomac the connecting link, and was himself the president of a company incorporated for that purpose.

In North Carolina, Judge Murphy made similar efforts. Indeed, there is a long history to it all—various States knocking at the door for passage through the mountain-chain. It was thoroughly understood and appreciated by Mr. Calhoun, of South Carolina, in its relations to railroad communication, the only method applicable to that State. But the natural and easiest vent of the commerce of the Mississippi Valley is on the coast of Georgia.

By observing the course of the Missouri River in a southeasterly direction to its junction with the Mississippi, and following the same direction to the ocean, it would terminate on the Georgia coast; and the water communication *via* the Mississippi, Ohio, and Tennessee, and then by canal and the rivers of

Georgia to the coast, would require no greater variation of direction than actually occurs in the course of the Missouri or other great rivers. A line from the head-waters of the Missouri to St. Louis continued, would strike the coast of Georgia ; and the water communication above indicated would have the same general direction.

The magnificent natural position of Georgia was understood by Governor Troup, who recommended practical measures for taking advantage of it. Those who have regarded Governor Troup rather as a man of vigor and will, than a man of thought, will find in his messages and speeches the traces of a deliberate and well-balanced judgment. The invention of railroads, as a new means of transportation, diverted attention from the canal system, which was just to be practically inaugurated under his administration with his warm support. It was supposed that these would more thoroughly displace canals than has proved true in fact.

In his annual message of 1824, Governor Troup said :

“ The period has arrived when Georgia can no longer postpone the great work of internal improvement. If considerations of the highest order could not prevail, State pride should be a motive sufficiently strong to determine her. Some of her sisters are already far in advance of her. Almost all of them have to a greater or less extent embarked in it. She sees the most enterprising and persevering among them, already deriving advantage from it, which places them in the first rank of opulence and power. A State, therefore, like Georgia, blessed by Providence with the means of reaching the highest commercial prosperity, by a road, plain, direct, and practicable, will no longer linger in the rear. She will begin, and, with a little patience and perseverance, instead of decaying cities and a vacillating trade, and what is most humiliating, that trade seeking an emporium elsewhere than within her own limits, she will witness the proud and

animated spectacle of maritime towns restored and flourishing, new ones rising up—her trade steady and increasing—her lands augmented in value and improved in cultivation—the face of the country beautified and adorned; and she may witness—what was once deemed impossible to human efforts—the western waters mingling with their own, and the trade of Missouri and Mississippi floated through her own territory to her own seaports; and all this within the compass of her own resources, provided the ordinary economy, prudence and foresight be employed to husband, cherish, and improve them.”

EFFECTS OF THE LATE WAR.—The prodigious retarding effect of the war is to be observed as one of the great elements which it will require time to overcome. We went foot. We are now spelling up slowly. Population and wealth were both set back, and the relations of all business undermined and revolutionized. One has well remarked that we lost our very business habits besides our occupation.

The wealth of Georgia in 1870 was returned as 20 per cent. less than in 1850—20 years before. In 1850, she was the 6th State in the Union in wealth, the 9th in population, and the 13th in white population. In 1870, she was the 20th in wealth. No study of any Southern State can be thorough which fails to recognize and examine this huge factor which divides the Old and New South.

The changes produced in Georgia by the war were as follows :
Population in 1850, 906,185.

“ “ 1860, 1,136,692—increase 230,507, or 25.43 per ct.

“ “ 1870, 1,184,109 “ 47,417, “ 4 “

At the former rate, the increase in 1870 would have been 288,720, instead of 47,417, making a loss of 241,303, by virtue of the 4 years' war, or 60,326 per annum, of persons actually lost by the war and the increase of population prevented—the former being the most active and valuable men of the commu-

nity, conducting its main business. This throws some light on the losses by the war.

The pecuniary losses were as follows. The wealth of Georgia was :

In 1850, \$335,426,000.

“ 1860, 645,895,000—increase, \$310,469,000 or 90 per cent.

“ 1870, 268,169,000—decrease, 377,726,000 “ 58.5 “

At the former rate, the increase would have been 90 per cent. —\$581,305,000 making the wealth of 1870, \$1,227,200,000 ; real wealth, \$268,169,000 ; loss, \$959,031,000. The loss was more than three times as great as the property left; and the estimate, at that, in greenbacks, not in gold.

The decennial tendency, moreover, was decidedly upward every successive decade ; so that the probable increase from 1860 to 1870, aside from the war, would have exceeded the foregoing ratio, and did exceed it at the North, in spite of the war.

The losses by the war have been equivalent to about 7 years' loss of increase in population, and 25 years' loss of wealth, besides the loss of business habits and the disorganization of industry.

The effect of all this is to make the Southern States generally—Georgia included—new States, now in their infancy, and have a new development.

VIEW OF THE FUTURE.—Set back 25 years in the race, we must look forward to a correspondingly long period for a new development—remembering, too, that the relative progress of other States will have been going on in geometrical progression.

But notwithstanding these discouraging circumstances, the future of the State, if no untoward event again occurs to check our natural progress, is full of hope. The progress already made by ourselves, with our own means, gives unmistakable assurance that we will, at no distant day, become opulent as a people and have a grand development of our State. Georgia will come to

be known, not merely as an Agricultural, but as a **Manufacturing State**, **Manufacturing Capital** will come to the **Cotton-fields**, and with it will come denser population, greater **general wealth**, and higher organization. Her **Mining resources** will be developed—Gold, Coal, Iron, Lime, etc., etc.—also her immense natural advantages of commercial situation. **Middle and Upper Georgia** will be sought for the climate as well as for other advantages, and will have a largely increased white population.

Georgia has the greatest diversity of resources and powers of adaptation, and is recognized as the **Empire State of the South**. Her career is in the future. Her great hope is in her own people. **Mr. John C. Reed**, in his book, **THE OLD AND NEW SOUTH**, says: "The best inheritance of the New from the old South is the Southern people. There is a great residuum of progressive energy, of intellectual strength, and moral worth in the people of the Southern States. They need not fear a comparison with the most enlightened communities. Great men, such as the South have given birth to, in unbroken succession, are the unmistakable signs of a great people. The rank and file of the Confederate armies have given proof that the men of the South must be classed, in all the elements of complete character, with the best that the world has ever seen.

It is the character of a people which constitutes a **State**, and in this we have abiding confidence. Not crushed by loss, Georgians are still full of pluck and energy, and think not of succumbing, but only of how to meet the new exigencies. Their resources are great in versality and power of accommodation, and proper use of their natural advantages will make them a noteworthy people.

IMMIGRATION.—Georgia presents to immigrants a splendid combination of advantages, natural and social. Many of them are common to the Southern States and some to the **Cotton States** only; while others are peculiar to Georgia. So numerous and

substantial are these advantages and inducements, as only to stand in need of appreciation to lead to a large immigration.

GENERAL VIEW OF THE SITUATION AND CONDITION OF THE STATE.—Georgia is admirably situated, with a fine ocean front on the South Atlantic coast—Savannah and Brunswick furnishing its chief ports for external commerce. It has several rivers emptying into the ocean and the Gulf of Mexico, which furnish considerable yet not the best facilities for inland navigation. The State in all sections is well wooded and watered. The climate is fine for production, health, and comfort. There is of soil, a great diversity, from very poor to very rich, and a remarkable range of agricultural production, embracing both provision and money crops, including among them cotton, rice, and sugar, with all the cereals and grasses, and an immense variety of fruits and vegetables.

The territorial dimensions of the State are ample—the area exceeding 58,000 square miles, with an average length of 300 and breadth 200 miles. The population, however, is rather sparse, being about the average of that of the organized States of the Union—say 22 per square mile. In 1870, the number of inhabitants was 1,184,109, of whom 638,926 were whites and 545,183 blacks.

The State is divided by nature into three great divisions—Upper, Middle, and Lower Georgia—terms in this case equally applicable to latitudes and altitude—the altitude rising with the latitude.

The wealth of Georgia in 1860 was relatively large—the aggregate being \$645,895,237—nearly \$1,100 to each white inhabitant. In 1870, five years after the war, the aggregate was reduced to \$268,169,207, being \$420 to each white, or \$268 to each inhabitant. The State debt until recently was far less than the value of the public property of the State, and probably does not now exceed it.

About 2,400 miles of railway are in operation, being one mile to every 28 square miles of territory, and one mile to every 500 inhabitants.

There is a newly organized system of public schools. The State University was founded in 1801. It is well patronized, and has a fair endowment. There are several denominational and other colleges, male and female.

The Capital of the State is Atlanta, a rapidly growing city of about 35,000 inhabitants. The civil divisions are: 137 Counties, 44 State Senatorial Districts, 9 Congressional Districts, and 20 Judicial Circuits.

Before the war, Georgia was generally regarded one of the most prosperous States of the Union; and since its close has been one of the most rapid of the Southern States in recuperation, and has ever enjoyed a high reputation for independence, vigor, and enterprise. Such is a very brief, general outline of the State.

The range of agricultural productions is remarkable for the following reasons: We reach nearly to the tropics. Our greatest length is from south to north, and the altitude increases with the latitude, thus supplying all the conditions of variety. From the semi-tropical products at the South, we pass above the cotton-belt in the mountain region. At the South, rice, cane and cotton are field crops, and the orange and banana are just reached, among tropical fruits. As we go higher, cotton is the leading money crop, and we reach the favorite region of the peach in all its lusciousness. The pear can be grown everywhere, even to the southern limit, in its greatest perfection. At the Pomological Fair in Boston, it was a Georgia Pear which took the highest premium, competing with those from California and the whole country. With the proper judgement and skill, a Georgia farmer should be one of the best off in the Union for wealth and comfort, having abundant supplies and money crops also.

The mineral wealth of the State is large. Unsurpassed manufacturing facilities—water-power, coal, iron, cotton—all together. This interest is beginning rapidly to develop.

Another remarkable and unappreciated fact is found in the splendid commercial situation of Georgia. Naturally, and upon a normal development and growth of commerce, she has the finest commercial situation on the continent.

There are geographical and topographical considerations establishing this fact, which we will hereafter consider. A great commercial future may yet be hers, for it is not too late for the needful improvement.

Finally, there are here the most splendid opportunities for diversification of labor—the needed condition of material prosperity.

All the great industries can be fully represented: Agriculture, in its best phases, for profit and comfort; Manufacturing and Mining under the most favorable conditions; and Commerce, including not only her own exchanges, but a remarkable proportion of those of other sections of the country. These industries developed will give rise to professional employment also—thus covering the entire range of the industries of a prosperous people.

VARIETY OF PRODUCTS.—There is no single state in the Union with such variety of climate and production as Georgia possesses. There is nothing grown in any of the states except Florida, which can not be profitably grown in Georgia. A few tropical fruits grow in Southern Florida which can not be raised in Georgia.

In the older parts of the state, much of the finest forests have been destroyed to make room for cultivation, but in portions of Middle and Northern Georgia there is still an abundant supply of hard-wood lumber, suitable for manufacturing Railroad Cars, Wagons and Agricultural Implements, besides a great variety suitable for manufacturing furniture; also forests of soft yellow

pine in Northwest Georgia ; while in Southern Georgia there are millions of acres of magnificent yellow pine forests, suitable for general building purposes, shipbuilding, etc. Within the last few years, Turpentine Plantations have been opened in these forests for the purpose of manufacturing naval stores. Large quantities of timber and lumber are being annually shipped from Brunswick and Darien to Northern, European and South American ports. In the south-eastern portion of the state the Live Oak—a valuable wood for shipbuilding—abounds.

GRASSES.—There are grasses adapted to every section of the State, both for pasturage and hay, surpassing in annual production, under careful culture, the heaviest yield per acre, those portions of the United States in which Hay is a staple crop, as will be shown under the results of Improved Culture.

MANUFACTURING PRODUCTION.—The various manufacturing interests of Georgia are yet in their infancy, but are destined to play no insignificant part in her future destiny.

During the existence of slavery the surplus capital and annual net earnings of her people were invested in slaves and land, and the whole energies of the people devoted to primary production. The habits of the people were thus formed, and thought and production directed in a peculiar channel from which it is difficult to divert them.

There has been but little surplus capital for investment within the last decade, in consequence of the want of a proper equilibrium of the productive forces of the State. When this equilibrium is finally adjusted, on such a basis that there will be an annual surplus capital for investment, it will naturally seek manufacturing industry, either for converting our exhaustless beds of ore into metals, or the metals into machinery ; or for converting our cotton and wool into yarns or cloth. The value and extent of our mineral wealth will be demonstrated by the Geological Survey now in progress, and attention drawn to the immense water-

power—the cheapest in the world—now running waste to the ocean,

There are now 36 Cotton Factories in the State, with 123,233 spindles and 2,125 looms. These mills consume 50,000 bales annually, or about 10 per cent. of the crop of the State.

There are 14 Woolen Factories, with 4,200 spindles and 135 looms.

Nearly all these factories—Cotton and Woolen—are run by water power.

There are 1,375 grain mills, of which 1,262 are run by water. There are in these 1,453 run of stones for corn, and 556 for wheat.

There are 734 saw-mills, of which 539 use water power.

In addition to the above there are Wagon and Carriage Factories, Iron Foundries and Furnaces, Potteries, Tanneries, Sash and Blind Factories, Turpentine Distilleries, etc.

The following extracts from an address of Hon. E. Steadman, read before the Convention of the Georgia State Agricultural Society, which met in Gainesville in August, 1876, set forth the advantages of the South for the manufacture of Cotton. Mr. Steadman has had large experience in manufacturing cotton in Georgia, and is thoroughly familiar with the subject. The general principles of these extracts apply with almost equal force to other manufactures.

“1. We, having cotton at hand, our factories can be supplied at one cent less per pound than any Northern or European cotton mill.

“2. By manufacturing a class of goods that are adapted to our home consumption, the advantages over foreign and Northern cotton mills, in our home market, is equal to one cent per pound on every pound of cotton so manufactured and sold. The two items of purchase of cotton, and sale of fabrics, at home, will give us a profit of two cents per pound upon the cotton so consumed.

"The amount of cotton manufactured with a capital of \$100,000, being 2,286 pounds, on sheetings, per day, amounts to \$45.72, and, per annum, to \$12,616, making in this item alone, 12½ per cent. on the capital invested.

"3. The wages paid to operatives in cotton factories in the Southern States, compared to the New England States, is 34 per cent. less.

"4. The cost of water or steam power is much less.

"5. The cost of material for building mills and operatives' houses is much less.

"6. The cost of subsistence is much less.

"7. Our climate is more favorable for the business.

"8. Cotton factories can now be constructed so as to use seed-cotton, by the use of a roller-gin which obviates all the danger from fire incident to saw-gins, thus saving over factories using bale cotton, in the South, 12½ to 15 per cent., while goods thus manufactured will be more valuable.

"I claim that cotton-mills, built now, with the latest improvements in machinery in the South, can manufacture goods at a less cost than at the North, leaving out the advantages of cotton and a home market.

"I claim that a cotton factory can be built here, of the same capacity, for less money than in New England—the cost of location and building material being as much less as will pay freight and charges on the machinery. To present my ideas practically, for your consideration, I will give an estimate for a small factory, and its operations for one year, also the data to substantiate the results claimed by me.

"The sum of \$100,000 properly expended in houses, power water or steam, and improved machinery, would put in operation 4,000 spindles and 100 looms, to manufacture 44 sheetings. Such goods are saleable at all seasons of the year, never being out of fashion, and as staple as the cotton from which they are

made. They are the plainest goods made by machinery, requiring less skill than many other goods, and their market value is as well known as that of the raw material, hence all can learn the facts, as well as a practical manufacturer. Such a cotton factory would produce, per day, under proper management, 6,000 yards of 4-4 sheetings, now worth $7\frac{1}{2}$ cents per yard, making the product of the factory \$450 as the gross earnings per day; and per annum of 300 days, \$135,000.

“The cost of manufacturing that quantity and quality of goods 6,000 yards, or 2,000 pounds of standard sheetings would be at this time, as follows—viz.: 2,286 pounds of low middling cotton, worth now $9\frac{1}{2}$ cents per pound, per day, \$217.17.

Wages of 100 men, women, and children, an average	
of \$1 per day.....	\$100 00
Sundry expenses—viz.: repairs, supplies, etc.....	30 00
Cost of selling the goods, worth \$450, at $7\frac{1}{2}$ per cent.	33 75
<hr/>	
Total gross expenses.....	\$380 92

Multiplied by 300 days (per annum) we have the sum of.114,276 00
Deducted from the gross earnings, leaves the sum of.. 21,724 00
as the net earnings per annum, or $21\frac{3}{4}$ per cent. on the capital invested to do the above amount of work—viz.: \$100,000.

“The same amount of money invested in diversified machinery, so as to produce a variety of fabrics, to suit the demands of the community where located, would be proportionately more remunerative, from the fact that some other fabrics, the prices of which not being so universally known, will command a larger price in market, while the cost of manufacture may not be more than that of staple cotton goods.

“The first proof I shall offer is the operations of the Augusta factory. From their published reports, for the six months ending June, 1875, running 717 looms, they made over 20 per cent.

"The amount of cotton manufactured with a capital of \$100,000, being 2,286 pounds, on sheetings, per day, amounts to \$45.72, and, per annum, to \$12,616, making in this item alone, $12\frac{1}{2}$ per cent. on the capital invested.

"3. The wages paid to operatives in cotton factories in the Southern States, compared to the New England States, is 34 per cent. less.

"4. The cost of water or steam power is much less.

"5. The cost of material for building mills and operatives' houses is much less.

"6. The cost of subsistence is much less.

"7. Our climate is more favorable for the business.

"8. Cotton factories can now be constructed so as to use seed-cotton, by the use of a roller-gin which obviates all the danger from fire incident to saw-gins, thus saving over factories using bale cotton, in the South, $12\frac{1}{2}$ to 15 per cent., while goods thus manufactured will be more valuable.

"I claim that cotton-mills, built now, with the latest improvements in machinery in the South, can manufacture goods at a less cost than at the North, leaving out the advantages of cotton and a home market.

"I claim that a cotton factory can be built here, of the same capacity, for less money than in New England—the cost of location and building material being as much less as will pay freight and charges on the machinery. To present my ideas practically, for your consideration, I will give an estimate for a small factory, and its operations for one year, also the data to substantiate the results claimed by me.

"The sum of \$100,000 properly expended in houses, power water or steam, and improved machinery, would put in operation 4,000 spindles and 100 looms, to manufacture 4-4 sheetings. Such goods are saleable at all seasons of the year, never being out of fashion, and as staple as the cotton from which they are

made. They are the plainest goods made by machinery, requiring less skill than many other goods, and their market value is as well known as that of the raw material, hence all can learn the facts, as well as a practical manufacturer. Such a cotton factory would produce, per day, under proper management, 6,000 yards of 4-4 sheetings, now worth $7\frac{1}{2}$ cents per yard, making the product of the factory \$450 as the gross earnings per day; and per annum of 300 days, \$135,000.

“The cost of manufacturing that quantity and quality of goods 6,000 yards, or 2,000 pounds of standard sheetings would be at this time, as follows—viz.: 2,286 pounds of low middling cotton, worth now $9\frac{1}{2}$ cents per pound, per day, \$217.17.

Wages of 100 men, women, and children, an average	
of \$1 per day.....	\$100 00
Sundry expenses—viz.: repairs, supplies, etc.....	30 00
Cost of selling the goods, worth \$450, at $7\frac{1}{2}$ per cent.	33 75
<hr/>	
Total gross expenses.....	\$380 92

Multiplied by 300 days (per annum) we have the sum of.114,276 00
Deducted from the gross earnings, leaves the sum of.. 21,724 00
as the net earnings per annum, or $21\frac{1}{4}$ per cent. on the capital invested to do the above amount of work—viz.: \$100,000.

“The same amount of money invested in diversified machinery, so as to produce a variety of fabrics, to suit the demands of the community where located, would be proportionately more remunerative, from the fact that some other fabrics, the prices of which not being so universally known, will command a larger price in market, while the cost of manufacture may not be more than that of staple cotton goods.

“The first proof I shall offer is the operations of the Augusta factory. From their published reports, for the six months ending June, 1875, running 717 looms, they made over 20 per cent.

on the cost of their factories, which was the sum of \$838,567.39—an average of \$1,169.55 per loom. And the above profits were made after paying all expenses, including an item of interest of \$11,834.04.

“The second fact I will give, is the action of the Eagle and Phoenix Manufacturing Company, of Columbus, who are building an additional factory with the accumulated profits of their factories, after paying good annual dividends to their stockholders. I will take opportunity to refer the doubting and croaking, who claim that we can not do any thing, to the Presidents and Superintendents of the above manufacturing companies, as samples of what can be done by others. I will also add, that the salaries paid by these companies to their presidents and superintendents who can not be excelled in point of business capacity are higher than any railroad, banking, or other corporation in this State. After paying such salaries, these corporations have made and paid to their stockholders larger dividends than any other corporation in this State.”

CHAPTER VII.

FLORIDA.

UNITED STATES LANDS IN FLORIDA ; FLORIDA PENINSULA, CENSUS ; DESCRIPTION OF THE COUNTRY AND ITS PRODUCTIONS ; HISTORY ; SOIL ; FIELD CROPS ; SUGAR ; GARDEN VEGETABLES ; FRUITS ; ORANGES AND OTHER FRUITS ; FRUIT CULTURE IN FLORIDA ; GAME AND FISH ; COTTON ; SEA ISLAND COTTON ; LETTER OF COMMISSIONER OF AGRICULTURE ; STOCK RAISING ; ADDRESS BY DR. A. S. BALDWIN ; TEMPERATURE ; TOPOGRAPHY ; RAINY SEASON ; HEALTH ; AREA AND POPULATION OF THE ITALIAN PENINSULA.

UNITED STATES LANDS IN FLORIDA.—From the Annual Report of the Commissioner, General Land Office for the year ending June 30, 1876.

Statement showing the number of Acres of public Lands surveyed up to June 30, 1875, including the present year, and the total of the public Lands surveyed up to June 30, 1876, also the total area of the public domain remaining unsurveyed within the same.

Area of public lands in the State :

Acres	37,406,520
Square miles.....	59,268

Total surveys up to June 30, 1876:

Acres.....	30,028,152
Public lands unsurveyed up to June 30, 1876, inclusive of private land claims :	
Acres.....	7,903,368

The quantity of land patented to the State of Florida under the Acts of Congress approved September 28, 1850, and March 12, 1860:

Acres.....	10,735,403
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The large amount of United State lands in the State, and especially in the peninsula of Florida, which it would be most

advantageous to the Government to open to settlement and cultivation, induces us to insert the following description of the State, its soil and resources.

FLORIDA PENINSULA, CENSUS.—That portion of Florida, on the Peninsula, lying immediately on and contiguous to this road embraces 18 counties, and contains 82,015 inhabitants, as shown by the last census. These counties are rapidly filling up. The following statistics are also from the census last taken :

Farms, acres improved	284,049
“ “ unimproved	800,488
Cash value farms	\$4,175,592
Estimated value farm products	3,714,316
Cash value live stock	2,963,656
Bushels corn	770,105
Bushels oats	24,453
Bales cotton	10,905
Pounds wool	15,308
Bushels sweet potatoes	489,124
Pounds rice	151,088
Gallons molasses	103,496
Hogsheads sugar	593
Pounds honey	5,247
Estimated value real and personal estate	\$18,706,786
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Georgia contains square miles	58,000
Florida “ “ “	59,248
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Total square miles	117,248

DESCRIPTION OF THE COUNTRY AND ITS PRODUCTIONS.—The following account of Florida and its productions is from an official document published by the State :

The geography of Florida is unique, and is of special interest, because many of the important characteristics of the State, which

seems to be contradictory, if not impossible, are easily explained by a consideration of its peculiar position and geographical character.

The shape of Florida is somewhat like that of a boot upside down, the foot part extending northwardly, and the leg pointing to the south. The foot part thus extends 350 miles, from east to west, while the leg, or the peninsula proper, extends southwardly over 400 miles.

The State contains 59,268 square miles, or 37,406,520 acres.

The whole territory lies within the region denominated as "hot" by the Physical Geographers. But the results that might be expected from its geographical location are materially affected by its peninsula shape, and its oceanic surroundings.

The peninsula averages in width about ninety miles, and is fanned by the Gulf winds on one side, and the Trade winds on the other; and thus, every portion is exposed to the balmy and vivifying influences of almost constant oceanic winds, and from all these geographical peculiarities have resulted a pleasantness and salubrity of climate, and a power of vegetable production, so wonderful as to be almost incredible.

The surface of the State is, as a whole, remarkably level, though this is more characteristic of the eastern and western portion than of the central part.

Perhaps the most marked of the geographical features of the State is to be found in the enormous extent of her coast line, which on the Atlantic and the Gulf exceeds 1,100 miles. The coast line is also remarkable for the great number of large bays and estuaries, which furnish facilities for commercial intercourse that will hasten the development of the resources of Florida beyond the expectations of the most sanguine.

Another marked geographical feature of the State is found in the number of large and navigable streams. The Appalachian, the Suwanee, the St. Mary's and the St. John's would be notice-

able rivers anywhere. The St. John's is one of the most surprising rivers on the globe. When it is considered that there is not an eminence in East Florida which attains the height of 200 feet, and that the St. John's winds through a level region, strangers are struck with astonishment as they ascend the river and find its average breadth two miles or more for 200 miles from its mouth. The ebb and flow of the tide are quite perceptible at the upper end of Lake George, more than 150 miles from the ocean.

Although the general character of the soil of Florida is sandy, still few portions of the whole United States are more bountifully provided with water, and that easily accessible. Springs of all kinds, some of clear sweet water, some strongly impregnated with sulphur, and others characterized by various mineral admixtures, are so abundant as to be little noticed. Some of these springs are of gigantic proportions, so large that complete rivers rush at once from the very bowels of the earth.

HISTORY.—The following is a brief abstract of the leading facts in the history of Florida. It was discovered in 1497 by Sebastian Cabot, sailing under the English flag; explored in 1512 and 1516, by Ponce De Leon, a Spaniard; in 1539, traversed by an armed force, commanded by Hernando De Soto, a Spaniard. In 1558 the French made a settlement near the mouth of the Saint John's River. In 1565 the Spaniards made a permanent settlement at Saint Augustine, and drove out the French. In 1763 it was ceded to England, in exchange for Havana. In 1783 was receded to Spain. In 1819 ceded by Spain to the United States. In 1845 was admitted to the Union as a State. In 1861, seceded from the Union. In 1868, again admitted to representation in Congress. It was sacked and pillaged repeatedly by Europeans; shifting its nationality from time to time, and losing almost its entire population by each change; harassed and plundered by repeated Indian wars

from 1816 to 1858, and just as prosperity began to dawn, plunged into a four years' war, she has suffered every evil, political and social, that does not involve absolute extinction.

The wonder truly is, not that she has not attained a more flourishing condition, but that she exists at all, and that her boundless forests, her lovely rivers, and her beautiful lakes are not fast locked in the silent embrace of a moveless desolation.

Without such reference to her previous history there would be an irreconcilable discrepancy between the present condition of Florida and that which might naturally be expected from a consideration of her fertility, her climate and her resources.

SOIL.—The extreme eastern and western parts of the State have a soil more or less underlaid with clay or marl, and interspersed to a greater or less extent with what are called "hammocks," or lands covered with a growth of hard wood.

But as one proceeds westward along the northern boundary of the State, the character of the soil changes from sand to loam, and then to a strong clay soil, until, in Leon, Gadsden, Jackson, and other counties, a large part of the soil is composed of a strong and rather heavy clay. Then taking a stretch of land in the northern tier of counties, extending from Madison to Jackson, inclusive, and thence down the Gulf, and extending along the Gulf coast from Liberty to Hernando, and including Sumpter, Marion, Alachua, Levy and other counties, one can find almost every conceivable variety of soil, adapted to the growth of nearly every crop that can be selected. Here, really, in the counties above mentioned, with whose characters strangers are almost entirely unacquainted, is the very cream and flower of the State of Florida.

That which is denominated "first rate pine land" in Florida has nothing analogous to it in any of the other states. Its surface is covered for several inches deep with a dark vegetable mould, be-

neath which, to the depth of several feet, is a chocolate-colored sandy loam, mixed, for the most part, with limestone pebbles, and resting on a substratum of marl, clay, or limestone rock. The fertility and durability of this description of land may be estimated from the well-known fact that it has, on the Upper Suwanee, and in several other districts, yielded during twenty years of successive cultivation, without the aid of manure, four hundred pounds of Sea Island Cotton to the acre. These lands are still as productive as ever, so that the limit of their durability is yet unknown.

The "second rate pine lands" of Florida are all productive. These lands afford fine natural pasturage; they are heavily timbered with the best species of pitch and yellow pine; they are, for the most part high, rolling, healthy and well watered. They are generally based upon marl, clay or limestone. They will produce for many years without the aid of manure, and when manured they will yield two thousand pounds of the best quality of sugar to the acre, or about three hundred pounds of Sea Island Cotton. They will, besides, when properly cultivated, produce the finest Cuba tobacco, oranges, lemons, limes, and various other tropical productions, which must in many instances render them more valuable than the best bottom lands in the more northern states.

Even the lands of the "third rate," or most inferior class, are by no means worthless under the climate of Florida. This class of lands may be divided into two orders; the one comprising high rolling sandy districts, which are sparsely covered with a growth of "black jack" and pine; the other embracing low, flat, swampy regions, which are frequently studded with "bay galls," and are occasionally inundated, but which are covered with luxuriant vegetation, and, very generally, with valuable timber. The former of these, it is now ascertained, owing to their calcareous soil, are well adapted to the growth of Sisal Hemp, which is a valuable

tropical production. This plant, the Agave Sisiliana, and the Agave Mexicanana Hemp, also known as the Maguay, the pulke plant, the century plant, &c., have both been introduced into Florida, and they both grow in great perfection on the poorest lands of the country. As these plants derive their chief support from the atmosphere, they will, like the common air plant, preserve their vitality for many months when left out of the 'ground.

It is scarcely necessary to add that the second order of the third rate pine lands, as here described, is far from worthless. These lands afford a most excellent range for cattle, besides being valuable for their timber and the naval stores they will produce.

There is one general feature in the topography of Florida which no other country in the United States possesses, and which affords a great security to the health of its inhabitants. It is this, that the pine lands which form the basis of the country, and which are almost universally healthy, are nearly everywhere studded at intervals of a few miles with hammock lands of the richest quality. These hammocks are not, as is generally supposed, low, wet lands; they never require ditching or draining; they vary in extent from a few acres to forty thousand acres, and will probably average about 500 acres each. Hence the inhabitants have it everywhere in their power to select residences either in the pine lands or upon the hammocks, as they may desire.

The topographical features here noted, namely, a general interspersion of rich hammocks, surrounded by high, dry, rolling, healthy pine woods, is an advantage which no other State in the Union enjoys, and Florida forms in this respect a striking contrast with Louisiana, Mississippi and Texas, whose sugar and cotton lands are generally surrounded by vast alluvial regions, subject to frequent inundations, so that it is impossible to obtain, within many miles of them, a healthy residence.

The lands which in Florida are, *par excellence*, denominated "rich lands," are first, the "swamp lands;" second, the "low

hammock lands;" third, the "high hammocks;" and fourth, the "first rate pine, oak and hickory lands."

The swamp lands are unquestionably the most durably rich lands in the country. They are the most recently formed lands, and are still annually receiving additions to their surface. They are intrinsically the most valuable lands in Florida, being as fertile as the hammocks and more durable. They are evidently alluvial and of recent formation. They occupy natural depressions or basins, which have been gradually filled up by deposits of vegetable *debris*, etc., washed in from the adjacent and higher lands. Ditching is indispensable to all of them in their preparation for successful cultivation. Properly prepared, however, their inexhaustible fertility sustains a succession of the most exhausting crops with astonishing vigor. The greatest yield of sugar ever realized in Florida was produced on this description of land, viz.: four hogsheads per acre. Sugar cane is here instanced as a measure of the fertility of the soil, because it is one of the most exhausting crops known, and is generally grown without rest or rotation. It is not, however, a fair criterion by which to judge of the relative fertility of lands situated in different climates, for we find on the richest lands in Louisiana the crop of sugar per acre is not more than one hogshead, or about half that of East Florida.

This great disparity in the product of those countries is accounted for, not by any inferiority in the lands of Louisiana or Texas, but by the fact that the early incursions of frost in both these States render it necessary to cut the cane in October, which is long before it has reached maturity, while in East Florida it is permitted to stand, without fear of frost, till December, or till such time as it is fully matured. It is well known that it "tassels" in East Florida, which it never does in either Louisiana or Texas. When cane "tassels" it is evidence of it having reached full maturity.

The Low Hammocks, from the fact of their partaking

of the nature of the hammocks and swamps, are not inferior to swamp lands in fertility, but perhaps are not quite as durable. They are nearly always level, or nearly so, and have a soil of greater tenacity than that of the high hammocks. The soil in them is alway deep. These lands are also extremely well adapted to the growth of the cane, as has been well attested by the many plantations which were formerly in operation here on this description of land.

The High Hammocks are the lands in the greatest repute in Florida. These differ from low hammocks in occupying higher ground, and in generally presenting an undulating surface. They are formed of a fine vegetable mould, mixed with a sandy loam in many places several feet deep, and resting in most cases on a substratum of clay, marl or limestone. It will be readily understood by any one at all acquainted with agriculture, that such a soil, in such a climate as Florida, must be extremely productive. This soil scarcely ever suffers from too much wet; nor does drought affect it in the same degree as other lands. High hammock lands produce, with but little labor or cultivation, all the crops of the country in an eminent degree. Such lands have no tendency to break up in heavy masses, nor are they infested with pernicious weeds or grasses. Their extraordinary fertility and productiveness may be estimated by the fact that, in several well known instances in Marion County, three hogsheads of sugar have been made per acre on this description of land, after it had been in cultivation six years, in successive crops of corn, without the aid of fertilizers.

To sum up its advantages, it requires no other preparation than clearing and plowing to fit it at once for the greatest possible production of any kind of crop adapted to the climate. In unfavorable seasons it is much more certain to produce a good crop than any other kind of land, from the fact that it is less affected by exclusively dry or wet weather. It can be cultiv-

ated with much less labor than any other lands, being remarkably mellow, and its vicinity is generally high.

The first-rate pine, oak and hickory lands are found in extensive bodies in many parts of the State, particularly in Marion, Alachua and Hernando counties. From the fact that those lands can be cleared at much less expense than the swamp and hammock lands, they have heretofore been preferred by small planters, and have proved remarkably productive.

There are, besides the lands already noticed, extensive tracts of savanna lands, which approximate in character, texture of the soil, and period and mode of formation, to the swamp lands, differing only in being destitute of timber.

Probably the largest bodies of rich hammock land in East Florida are to be found in Levy, Alachua, Marion, Hernando and Sumpter counties. There are in Levy county alone not less than one hundred thousand acres of the very best description of sugar lands; and there is but a small proportion in any of the five counties here cited that will not produce remunerative crops of Sea Island and short staple cotton, without the aid of fertilizers.

FIELD CROPS.—In no State of the Union can so extensive a variety of valuable productions be successfully cultivated as in Florida. Most of the crops grown in the temperate zone flourish in the northern portion of the State. Nearly all the peninsula is adapted to the cultivation of semi-tropical fruits. At least one half of the entire area of the State is south of the line of frost, and will grow successfully the tropical productions of the West Indies.

Indian Corn is to the mass of the people the “staff of life.” It is grown in all parts of the State. On rich bottom lands from fifty to sixty bushels per acre is not uncommon.

SUGAR Cane can be raised on almost any of the soils of the State, on some, of course, more successfully than others; in

far the greater portion of the State it rattoons, or springs up from the old roots, and so does not for several years require re-planting: it produces more largely and is more easily cultivated in Florida than in any other State, not excepting Louisiana.

It is a circumstance of frequent and common occurrence for \$300 and over to be realized from the produce of sugar and molasses made from the cane grown on one acre only of our common pine lands.

Instances of 19, 21, and of 24 barrels of syrup made to the acre, are reported.

Statistical returns from Marion, Alachua, Suwanee, and Orange counties, make 2,500 lbs. of sugar per acre, an average return for good cultivation. Accounts from Hernando county give 2,600, 3,400, and 3,600 lbs. of sugar as the actual product per acre of three sugar crops in that county, thus giving an average of 3,200 lbs. to the acre.

It is computed that one gallon of syrup will make five pounds of sugar. Twenty forty-gallon barrels of syrup, therefore, would give four thousand pounds of sugar, and four hogsheads of sugar have been made to the acre.

In Middle and South Florida it grows to ten and twelve feet in height, and in South Florida has grown to the height of seventeen feet. There it matures, tassels and produces seed.

There are millions of acres in Florida that can and will produce easily two thousand pounds of sugar to the acre; and many of our most intelligent planters firmly believe that the pine lands fertilized will produce a better quality of sugar than can be raised on the black, so called "sugar lands."

The readiness with which irrigation can be provided in Louisiana, and the richness of the millions of acres of its alluvial lands, give it high advantages over all the other States named, except Florida, where, however, the industry has not taken hold, and

probably will not while other products for which it is equally well fitted command their present market prices. The result arrived at shows beyond a doubt that when such profits can be obtained by the outlay of a moderate capital, the industry must daily become more tempting to investors as capital increases and profits in other directions diminish.

The following letter shows the expense and profits of sugar planting in Louisiana :

PLAQUEMINE POST-OFFICE,
Parish of Iberville, La.,
Sept. 25, 1877.

Receiving letters from persons cultivating canes, asking questions too numerous to answer by letters, I have at great trouble taken the pains to make a statement of expenses and profits in cultivating canes. These figures are as correct as possible. Wages at \$1.25 for men, canes at \$20 the acre for seed, and supposing 10 tons to the hogshead and 20 tons to the acre for good plant canes. Some years it requires more than 10 tons for a hogshead and some years less. Last year it took $8\frac{1}{2}$; this year it will require at least 12 tons—probably 15 tons; I have seen it take 18 tons. These figures are of the greatest use to both small planters and manufacturers. If the manufacturer has a steam train and vacuum and centrifugals, the profits will be greater.

M. SCHLATRE.

CANE AND LABOR PLANTING FIFTY ACRES.

Required to plant and cultivate 50 acres of cane, ready laid by, supposing the land ready in pea vines :

Canes necessary to plant 50 acres at \$20 the acre,	\$1,000 00
Pulling in pea vines in middles, at \$1.10 the acre,	55 00
To plow and cover pea vines.	50 00
To bed back and fluke out after opening furrows,	90 00
To labor hauling canes for 50 acres, 8 men, 5 days,	60 00

To getting canes out of windrow, 4 men, 5 days..	25 00
Cane droppers' wages, for 50 acres, at 75 cents the acre.....	37 50
Cane carriers' wages, for 50 acres, at 50 cents the acre.....	25 00
To cut and straighten in furrows.....	10 00
Covering cane with single plow.....	12 50
Going over with hoes after the plow to cover all left uncovered by the plow.....	12 50
Opening drains after planting.....	12 50
Value of cane and labor for planting 50 acres....	<u>\$1,390 00</u>

CULTIVATING FIFTY ACRES.

First plowing.....	\$50 00
First hoeing.....	62 50
Running cultivators twice.....	50 00
Last three plowings and fluking.....	200 00
Clearing out drains after last plowing.....	37 00
Last two hoeings well done.....	125 00
For clearing leading ditches, per acre 60 cents...	30 00
Keeping ditches in order.....	12 50
Total cost of labor for cultivating 50 acres of cane,	<u>\$567 00</u>
Value of cane and labor for planting 50 acres....	1,390 00

Total cost of cane, planting, and cultivating 50 acres	\$1,957 00
Mule hire and feed for hauling seed cane and cul- tivating 50 acres.....	<u>456 00</u>

Total cost of seed cane, labor, and hire of mules for 50 acres of cane.....	\$2,413 00
Value per acre of cane, cost to the planter, stand- ing ready for the mill.....	48 27

The crop from the five acres may be assumed at 20 tons of cane to the acre, yielding about two hogsheads of sugar.

COST OF TAKING OFF ONE HUNDRED HOGSHEADS OF SUGAR.

50 hands will do the work in 12 days, wages \$1.25 per day.....	\$750 00
50 hands, watches at night, 50 cents each for 12 nights.....	300 00
5 barrels lime.....	10 00
25 gallons coal oil at 25 cents.....	6 25
8 gallons lard oil.....	8 00
300 pounds sulphur at 5 cents.....	15 00
Sugar maker's bill, \$1.50 per hhd.....	150 00
Engineer's bill for half a month.....	50 00
Fuel, 350 cords of wood at \$2.....	700 00
100 empty hogsheads at \$3.25.....	325 00
150 empty barrels at \$1.50.....	225 00
5 four-mule carts for 12 days, at \$3.25 and feed for animals.....	156 00
2 bagasse carts at \$1.50, with hire of 4 mules and feed for 12 days.....	36 00
<hr/>	
Total amount expenses to convert the canes into sugar.....	\$2,731 25
Incidental expenses.....	250 00
<hr/>	
	\$2,981 25
Say in round numbers.....	3,000 00

Expenses for manufacturing 100 hogsheads of sugar, or \$30 the hogshead, which, added to the cost of the canes, ready for the mill, \$48.27, you have \$78.37, the cost of cultivating one acre of cane and manufacturing one hogshead of sugar.

YIELD OF FIFTY ACRES OF CANES IN SUGAR AND MOLASSES.

100 hhds. of sugar at 8 cents, 1100 lbs. to the	
lhds., 8 cents.	\$8,800 00
150 hhds. of molasses at \$18 per barrel.	2,700 00
Cistern bottoms.	300 00
	<hr/>
	\$11,800 00
Expenses of cultivation and manufacturing.	5,413 50
	<hr/>
Profits on sugar and molasses, net.	\$6,386 50

If the sugar and molasses bring \$11,800 in market, and the manufacturer agrees with the cultivator to give him one half, then the cultivator will get one-half of \$11,800—\$5,900—\$2,456 cost of planting and cultivation—\$3,444 for his fifty acres. of canes taken off on halves.

If sold by the ton the cultivator will get either \$1,789, if he is to deliver it at the sugar house, or \$1,544 if the manufacturer takes it out of his field.

Next to Indian corn, the most important article of vegetable food in common use is the sweet potato. They do best on light soil. The yield per acre is from 100 to 300 bushels, depending upon the season, culture and quality of soil. They are propagated from the seed, like Irish potatoes; from draws, and from the vines. The crop is a profitable one and deserving of more attention, as a market crop, than it has hitherto received. Sweet potatoes bear shipment well, and always command good prices in the Northern markets.

Irish Potatoes.—This crop does not produce as well as at the North, but is off in time to be followed by a crop of sweet potatoes the same year. They should be planted in December and January, although good crops are sometimes obtained from later planting. The potatoes are fit for digging in April and May. They can be shipped without difficulty, and at a moderate

expense to Northern markets, where early potatoes always bring a good price.

Rice. There is much land in Florida well adapted to the culture of rice. It has been raised to quite an extent. Forty to sixty bushels per acre of rough rice is an average crop, and may be cultivated to advantage in many locations. It is much used as an article of food by all classes.

Tobacco.—Cuba tobacco was largely cultivated in the County of Gadsden before the war, and to some extent in some other portions of the State. Three cuttings in a season are produced from the same stalks. Tobacco is an exhaustive crop, and requires a fertile soil, and its cultivation may be made extremely profitable. Seven hundred pounds to the acre is an average yield.

Indigo.—Under the British occupation of Florida, indigo was the principal staple. It is a sure crop. The plant has become naturalized or is indigenous, and is found growing wild in various parts of the State, and may be cultivated extensively.

Sisal Hemp.—Dr. Henry Perine introduced the Sisal Hemp into South Florida twenty-five years ago, from Yucatan. It is a tropical plant. The soil and climate of south Florida is well adapted to its growth. It is no longer an experiment, as to the growth of the plant, the amount of the product or the value of the fibre. It requires no replanting and very little care after the first year or two. A ton of cleaned hemp can be made to the acre.

Castor Bean.—The Palma Christi, or castor bean, grows luxuriantly. In the southern portion of the State it is perennial, and attains the size of a small tree.

Silk.—At one time silk-growing received considerable attention at St. Augustine. The conditions for a successful prosecution of the business seem peculiarly favorable. The mulberry is a native of our forests, Cocoons of the silk-worm are often

found. The climate is more mild than that of Italy, and there is no reason why the mulberry tree should not be cultivated, and the silk worm raised with profit.

Coffee.—We know no reason why coffee should not be grown successfully south of the 28th parallel. More than forty years ago a Philadelphia Company sent out an expedition to explore the country and select suitable spots for the cultivation of the coffee plant; but the project was abandoned, Congress refusing the grant of lands required by the Company. Both our climate and soil are found suitable for the culture of coffee, and it cannot fail to become, in a few years, an important item.

Pea Nuts.—The pea nut grows well on almost any warm, light soil. A hundred bushels to the acre is an average crop. They produce an oil equal to the finest olive oil.

Ramie.—The Ramie plant has been recently introduced. The plant produces a fibre of fine quality and glossy whiteness, which is used in manufacturing cloths, either by itself or mixed with silk or wool. It is a hardy and vigorous grower, and in this climate, perennial. The fibre of the Ramie is stronger than the best European hemp; it may be spun as fine as flax, and it is doubly durable, it will produce from three to five annual crops, each equal to the best gathered from hemp.

Arrow-root.—The Koonta, or Indian arrow-root, grows wild in the southern portion of the peninsula. It was formerly manufactured quite extensively; the sole labor consisting of bringing it from the forest lands and conveying it to the mill; the simple stirring occasioned by the digging being sufficient to secure a better crop than the one just removed.

The Bermuda arrow-root also flourishes, producing, even on pine lands, from two to three hundred bushels per acre. The yield of merchantable arrow-root flour is from six to eight lbs. to the bushel.

WHEAT, RYE, AND OATS.—Wheat grows in the northern part

of this State. Rye and Oats are raised to some extent, chiefly as forage crops.

GARDEN VEGETABLES.—The growing of vegetables for the Northern markets has not, until recently, received much attention. Vegetables grown here can be placed in the markets of the Northern seaboard cities from six weeks to two months earlier than from any other State. As far south as Enterprise, nearly all the vegetables cultivated in a market garden can be ripened in any month in the year. The chief difficulty is that of transportation. Florida will become, at no distant day, the early market garden for all the Northern cities.

Tomatoes.—The tomato is easily cultivated, and produces abundantly. Early lots sell for almost marvelous prices in New York, and other eastern cities—\$1,200 has been netted from a single acre. They will yield from four hundred to five hundred bushels to the acre. South of Palatka they ripen in the field every month in the year.

Cucumbers.—In May last, Florida cucumbers were quoted at \$8 to \$10 per hundred in the New York market. The plant has to contend with few of the enemies so destructive at the North. It bears shipment exceedingly well.

Melons.—There is no country where the watermelon attains so great perfection as in Florida, and we might add, where they can be raised with less care. The muskmelon and cantaloupe also flourish. Great quantities have been shipped the past season, and profitably laid down in New York, and other Northern cities.

Peas.—Soils that contain some lime, quite rich and moderately moist, are the best for peas. The month of January is the best time to plant. The crop will then be ready for market in April, at which season green peas command high prices all over the country. They bear shipment well, and are a profitable crop, and were transportation quick and easy they would be raised in great abundance.

Beans.—Beans of all kinds grow well, particularly the Lima bean. The Lima is found in almost every garden. Snap-beans are very prolific, and their culture for shipment like the pea is worthy of attention.

Cabbages and Turnips.—Cabbages succeed best in winter. Sown in the fall they will produce fine heads in the Spring months of April and May. Turnips can be had fresh every month in the year, and are particularly a valuable winter crop. Cauliflower, brocoli, and kohl-rabi are grown without difficulty. The latter is very common in the eastern market.

Beets, &c.—Beets do best in a deep, rich, moist soil. For winter use, plant in September or October; for summer, in January or February. Carrots and parsnips should be treated in the same manner.

Miscellaneous Crops.—All the vegetables usually cultivated in a good family garden can be raised. Squashes are grown with great ease and of the best quality. Onions, lettuce, radishes, celery, etc., etc., grow to perfection; also peppers, parsley, etc. Asparagus and rhubarb succeed with the usual attention. The egg-plant does finely. Okra is found growing in every garden. It is highly prized.

FRUITS.—There can be but one opinion as to the fitness of Florida for the growth of tropical and semi-tropical fruits. In this respect Florida enjoys a monopoly which will make her one of the richest and most important of the United States. Oranges, lemons, pineapples, and various other tropical fruits, the adaptability of the climate makes even the inferior lands of Florida susceptible of producing crops more valuable than those of the best lands in other parts of the Union.

ORANGES AND OTHER FRUITS.—The orange belongs to the *citrus* family, in which are included the lemon, lime, citron, shaddock and similar fruits. The varieties are numerous. In their native state they continue flowering nearly all the summer, and for a consider-

able portion of the year. Every stage of growth, the bud, flower, green and ripe fruit, can be seen on the tree at the same time. The sour orange and the bitter-sweet grow wild upon the St. John's and Indian Rivers, and in many parts of the peninsula.

The primeval woods on the banks of the Indian River are vast gardens of the sour wild orange. These oranges are to be found in nearly every part of the woods. The orange is a sure crop. The tree is long-lived and has very few enemies.

The oranges of Florida are celebrated for their superior quality. At present the best method of establishing a grove is to set out the wild orange trees, and, at the proper time, bud them with the sweet orange. The sour trees may be dug up at any time during the winter and transplanted. The tree usually commences bearing the third year from transplanting. They are brought from the hammocks on the upper St. John's. The orange will grow upon almost any soil.

A grove in full bearing should average eight hundred to the tree. Many trees will bear from one thousand to three thousand, and some as high as seven thousand per year.

In Jacksonville oranges have sold, the past season, at from twenty-five to sixty dollars per thousand. Taking eight hundred as the average per tree, and one hundred trees to the acre, we have eighty thousand oranges from an acre, which, at thirty dollars per thousand, which may be taken as the average price, will give two thousand four hundred dollars; while at twenty-five dollars, the lowest price at which good oranges were sold, we have two thousand dollars as the income from a single acre. It requires no great outlay of capital to start an orange grove, and its care involves no more labor than the care of an apple orchard of the same size. We leave it for parties interested to calculate the profits arising from an orange grove of ten acres in full bearing. We are quite sure that the credit side of the sheet will show that the profit of growing the orange

is larger, in proportion to the expenditure of money and labor than that derived from the cultivation of any other crop grown in the United States.

Lemons, Limes, Citrons, etc.—It will be unnecessary to go into detail regarding these fruits, since the remark we have made in regard to the soil, climate, and culture required for the orange will apply equally to them. The lemon is a trifle more hardy than the orange. The Sicily lemon, budded on the sour or bitter-sweet orange, does finely.

The lime is a prolific bearer, and a most wholesome and excellent fruit. In South Florida the tree is in bearing nearly the whole year. A good business could be done at raising them for the juice, which is an article of commerce.

The citron grows on a straggling bush, which requires support while the fruit is ripening. They are six to eight inches in diameter, of a rich yellow color, hanging from the slender branches, fitting emblems of the golden fruits of autumn. The citron does well wherever the orange flourishes.

The shaddock resembles a large lemon.

Peaches.—The peach attains its highest degree of perfection at the South. The trees possess more vigor and greater longevity than at the North. So well adapted is the climate to the growth of the peach, that they are found growing wild by the roadsides and in the corners of the fences. With communication, there will be no difficulty in shipping them to New York, where, during the months of May and June, they would command high prices.

Grapes.—The South is the true home of the grape. It is found wild in the forests of Florida, and grows luxuriantly. In the southern part of the State three crops of grapes in a year are gathered. The Black Hamburg, White Muscat, Golden Chessalas, and other foreign grapes, grow and fruit finely in the open air. The Concord succeeds well, and is so much im-

proved that it is nearly equal in quality to the **Black Hamburg**. The scuppernong is cultivated more widely than any other variety. It makes a fine wine.

Figs.—Of all the fruit cultivated in the South, the fig requires the least care, and is one of the most useful. It is propagated readily from cuttings, which usually bear the second year. During the summer months the fig may be found upon the breakfast tables of all lovers of fine fruit. When ripe, it is mild, rich and luscious. Every one in Florida who owns a foot of land may literally “sit under his own vine and fig tree.”

Pomegranates.—The pomegranate is common in Florida. There are the sweet and sour varieties. The bush is a pretty, ornamental shrub, and, with its beautiful blossoms and pendant fruit, is decidedly ornamental. The rind is very bitter, and has been used as a substitute for Peruvian bark; but the juice, which is contained in little sacks surrounding the seeds, is a pleasant acid, and quite agreeable.

Apples, Pears and Quinces.—These fruits are cultivated in the northern part of the State.

Plums, Apricots, and Nectarines.—The plum grows wild all over the State, and some of the varieties are scarcely inferior to many of the cultivated varieties. Apricots and nectarines succeed quite as well as the peach.

Berries.—There is no place where the blackberry is more perfectly at home than in Florida. The huckleberry grows everywhere, and is plentiful in market. The strawberry is easily cultivated, and bears abundant crops. The vines will continue in bearing for six months. The mulberry grows wild, and bears two crops in a year.

The Olive.—The olive has been successfully cultivated. Trees grown from the seed commence bearing the tenth year, and are fully productive about the twentieth or twenty-fifth.

The Banana and Pineapple.—In all the southern portion of the peninsula the banana does finely. The pineapple also succeeds admirably in South Florida. It and the banana are raised from suckers, which come into bearing about eighteen months after being planted. The banana grows to the height of thirty feet; the pineapple to a height of about three feet.

Of strictly tropical fruits that are worthy of attention, in addition to those above noticed, may be mentioned the guava, sappadillo, sugar-apple, tamarind, alligata pear, pawpaw, plantain, cocoa-nut and the date. All the above are growing luxuriantly in South Florida. The cocoa-nut is a large tree, rising above all the other trees of the forest. The fruit is ripening the year round. The pecan-nut can be raised without difficulty, and the almond.

FRUIT CULTURE IN FLORIDA.—But very little capital is needed for the starting of a grove, and the rewards of a successful one are very great. Oranges sell at from \$25 to \$68 per thousand in Jacksonville, and are readily transportable to any of the Atlantic seaports. When the necessary dredging and building of canals has been accomplished, so that the Indian river may have an outlet via the St. Johns, the north will be supplied with oranges of more delicate texture than any it has yet seen; and the number of groves along the river will be legion. The fitness of Florida for the growth of the tropical and semi-tropical fruits is astonishing. Not only do the orange, the lemon, the lime, and the citron flourish there, but the peach, the grape, the fig, the pomegranate, the plum, all varieties of berries, the olive, the banana, and the pineapple grow luxuriantly. Black Hamburg and White Muscat grapes fruit finely in the open air; the Concord and Scuppernon are grown in vast quantities. The guava, the tamarind, the wonderful alligata pear, the plantain, the cocoanut and the date, the almond and the pecan, luxuriate in Southern Florida.

We have within our boundaries a tropic line, rich and strange which will in future years be inhabited all winter long by thousands of families, and where beautiful towns and perhaps cities will spring up.—*Scribner's Magazine*.

GAME AND FISH.—Everywhere on the coast, both of the ocean and the gulf, excellent oysters abound. The oysters of St. Andrew's Bay are celebrated throughout the South, and those of Indian River are larger, finer and still more abundant. And more than half the Florida coast, turtle in immense quantities and of great size are continually taken. The capacity of these waters for oysters and turtle is almost inexhaustible.

Fish, of the best quality, are to be found on all the coasts and in all the lakes and rivers, forming a cheap, easily attainable and very wholesome article of diet, and giving opportunity for business in this direction to almost any extent. It is no exaggeration to say that the bays and inlets, as well as rivers, of Florida swarm with valuable fish. Very valuable shad fisheries may be carried on in various localities.

Turkeys, ducks, squirrels, deer and bear are to be found throughout the State, and no part of the United States can furnish a more exciting or agreeable winter hunting ground.

While the North and West are covered with snow, the hunter in the Indian River region may comfortably camp out month after month, with a single blanket, taking, as he needs his sweet potatoes from the ground, and the orange, lemon and banana from the plantations along the route, and in the continuous sunshine of an unending Spring, surfeit himself with the pursuit of game.

Key West is the headquarters of the sponge business. Large quantities are annually gathered in the shallow waters along the coast, and form an immense trade.

COTTON.—The transportation of cotton will be a large item in the profits of the road. There were produced, as shown by the

last census in the counties directly upon the line of the road or strictly tributary to it, 25,000 bales in Georgia, and 40,000 bales in Florida. This cotton would seek a market over this road. But the main portion of the cotton transported by it will be that thrown upon it by the tributary roads. All the cotton from Florida, Southern and Southwestern Georgia, sent direct to Charleston, Wilmington, Baltimore, Philadelphia, New York or Boston by rail, will pass over this road, either from the Peninsula of Florida north, or from Jesup, Ga., being there thrown upon it by the Atlantic and Gulf road, by the Brunswick and Albany from the southwest, and by the Macon and Brunswick road from the southeast. In the transportation of cotton to a market, a large portion of it is sent over the shortest railroad lines, and in the quickest time, and thus it would be given to this road.

In a single year Florida produced 63,322 bales of ginned cotton. Both the long staple or Sea Island, and the short staple or upland cotton, are cultivated. There is but little long cotton grown west of the Suwanee river, except in the county of Gadsden, and scarcely any short cotton east of the Suwanee. Two hundred to three hundred pounds of short cotton per acre is a fair yield upon ordinary soils, but five hundred pounds per acre is not an unusual crop on strong land. Long cotton produces from one hundred to two hundred pounds per acre as an average crop, but under favorable circumstances three hundred and even four hundred pounds have been raised.

Four-fifths of the country through which this railroad passes is cotton producing country, and the opening of it by lines of communication will develop to an unlimited extent the production of this staple.

SEA ISLAND COTTON.—It is a fact worthy of special note that the line of this railroad traverses the full extent of the only region in the world adapted to the culture of the Sea Island or Long Staple Cotton. The only exception to this is a few square

miles of territory on the coast islands of South Carolina. This road enters the country producing Sea Island Cotton exclusively, a few miles south of Jesup, and thence south continues its entire length in the soil and climate peculiarly adapted to the production of this most valuable staple. Short staple cotton is not grown at all upon the Peninsula of Florida. The opening of this country by railroad will, in a few years, quadruple the amount of Sea Island Cotton now grown in the world. The cultivation of it has always been lucrative, but the means of transportation from this, the only large area adapted to its growth, have been wanting. The territory adjacent to the line of this road has any easy capacity of a million bales of long staple cotton, and if for no other reason it should be opened to develop the growth of this most valuable product.

LETTER FROM THE COMMISSIONER OF AGRICULTURE, transmitting, in answer to a Senate Resolution of March 6, 1876, information in relation to the soil and climate adapted to the growth of sea island cotton.

DEPARTMENT OF AGRICULTURE, }
WASHINGTON, March 9, 1876. }

Sir :

Soil of Marine formation appears to be necessary, and a sea atmosphere with its warmth and equability. A sandy deposit of marine salt, but little above the sea level, permeable by the moisture beneath, and convenient for the requisite manuring by salt-marsh, furnishes conditions for the highest production of sea island cotton.

Limited as is the area suited to the culture of this variety, it is by no means occupied. The economic aspects of this production have not been favorable to its extension. Among the largest crops produced are those of fifty years ago. The product of 1827 was fully 15,000,000 pounds, or 47,000 bales of 320 pounds each, while the average for the past ten years is less than half as much,

or 7,000,000 pounds, nearly 22,000 bales. The record of these crops, with the geographical distribution of production, is as follows :

Years.		Florida.	Georgia.	South Carolina.	Texas.	Total.
1874	bales,	8,313	1,110	7,400	204	17,027
1875	do.	8,825	1,408	8,759	920	19,912
1876	do.	10,764	1,219	13,156	1,100	26,289
1877	do.	5,624	1,567	8,755	899	16,845
1878	do.	8,753	4,934	7,218	704	21,609
1879	do.	9,948	9,225	7,334	.....	26,507
1880	do.	6,703	6,371	5,604	.....	18,678
1881	do.	10,402	6,296	4,577	.....	21,275
1882	do.	11,212	10,015	11,001	.....	32,228
1883	do.	2,428	10,957	5,630	.....	19,015
Total	do.	82,972	53,152	79,438	3,827	219,389

Edisto Island, south of Charleston, is the most prominent locality for the production of long staple cotton. Saint Simon's Uky, and Skidoway, are also favorably known for products of high quality.

In conclusion, the "geographical limits and area," in which sea island cotton "matures perfect growth," include the islands of the coast of South Carolina, Georgia and Florida, and the Gulf of Mexico, and a few miles inland from the coast, ten or fifteen, more or less, the line extending farther inland up the river valleys, which have a marine soil and unobstructed sea breeze, and encircling most of the area of Florida.

The proportion of upland to sea island cotton product is about 200 to 1. Probably not more than 100,000 acres are now devoted to its culture, while that occupied in upland culture is from one hundred to one hundred and twenty times as much.

I am, yours very respectfully,

FREDK. WATTS,

Commissioner.

STOCK RAISING. On much of the land is to be found a large growth of oaks, scattered among the pines, which furnish abundance of mast, on which, in the genial climate of Florida, with little care or protection, hogs can be raised *ad libitum*. They are to be found everywhere, throughout the forests of the whole

peninsula, half wild and in good condition, finding easily an independent support.

The whole territory is likewise covered with a more or less thick coat of grasses, which retain their greenness to a greater or less extent throughout the year. Cattle maintain themselves in good condition, entirely without care. In the southern portion of the state are found large prairies, called savannas, covered with tall grasses, which afford good nutriment for cattle. Upon them large herds pasture, which are driven up occasionally by their owners; the heaves selected out and the calves marked. During the war the Confederates drew large supplies of beef from Florida. Some of the heavy cattle men own as many as twenty-five to thirty thousand head each.

Sheep also do well in Florida, as the climate is warm and suited to their nature.

The Peninsula of Florida is four hundred miles in length, from north to south, having an average breadth of ninety miles. No railroad has yet penetrated this vast region south of the Florida Railroad. Excepting such portions of it as are under cultivation, it is devoted exclusively to the raising of cattle, which pasture winter and summer upon the grasses growing everywhere equally well at all seasons of the year, in forest and on prairie alike. Millions of cattle roam over this country, and stock growers number their herds by tens of thousands. These cattle have been increasing and accumulating until now the country is fully stocked, and many fear already stocked beyond its capacity to support them. The only available market has been that of Havana, whither they were carried by steamers and sailing vessels from Charlotte's Harbor. Otherwise they were driven several hundred miles, either to Savannah or Augusta. The market has not been equal to the increase, and the opening of this railway will open the markets of the North for these cattle, and greatly facilitate their transportation to Cuba.

ADDRESS BY DR. A. S. BALDWIN.—The following extracts are taken from an address by Dr. A. S. Baldwin, President of the Medical Association of the State of Florida, before that Association, in the City of Jacksonville, on the 18th day of February, 1875.

TEMPERATURE.—To elucidate this we have ample materials, and to make it clear and easily understood, I have tabulated the abstracts of mean temperature taken at seventeen stations besides my own. From this we learn that the mean temperature of the spring for the entire state is $71^{\circ}.62'$; for the summer, $80^{\circ}.51'$; for autumn, $71^{\circ} 66'$; for winter, $60^{\circ} 04'$; and for the year, $70^{\circ} 95'$; and for the stations on latitude 28° N, and south of it, for the spring we have $74^{\circ} 94'$; for summer, $81^{\circ} 93'$; for autumn, $76^{\circ} 57'$; for winter, $63^{\circ} 59'$; and for the year, $74^{\circ} 87'$; for the stations north of latitude 28° N, we have for the spring, $70^{\circ} 66'$; for summer, $80^{\circ} 10'$; for autumn, $70^{\circ} 23'$; for winter, $58^{\circ} 29'$; and for the year, $69^{\circ} 82'$. There is not exhibited any great difference between the northern and southern portions of the state, but enough to afford a choice of temperature during the different seasons, if the visitors desire a change. During spring, the temperature south of 28° latitude is $4^{\circ} 28'$ higher; and for summer, $1^{\circ} 83'$; for autumn, $6^{\circ} 34'$; and for winter, $5^{\circ} 40'$ higher than it is north of latitude 28° .

The average number of frosts for the month of January, in Jacksonville, in twenty-seven years record, 5.4; for February, 3.1; for March, 1.3; for April, 0.2, and no more until October, 0.2; in November, 2.3; for December, 5.2. The first frosts in the fall have occurred in October, four times; in November, sixteen times; in December, seven times; and twice the second frosts has occurred in February. There have been several years in which no frost occurred in October; there have been years in which none occurred in November or December. There have been years

when no frosts occurred in January, none in February, still more in which March was exempt ; very few frosts have occurred in April, and none after. In 1858 a frost occurred on the 28th of April, which is the latest recorded ; and there have been but four Aprils in which frosts have been recorded ; and there have been but four Octobers in which they have been recorded. From these statements an idea can be formed of the average amount of freezing in winter. December and January are the oftenest visited with frosts, a little over five times in each month on an average.

As clearness of sky is connected with the subject of radiation, and is also an important element of climate, it will be introduced here. I have, in making up my results, of which I propose to present an abstract, counted those days clear which were marked from 0 up to 5, the latter representing the sky half covered with clouds. The month of January, from twenty-two years' observation, has had an average of 20.3 clear days ; February for 25 years, 19.5 ; March, for the same period, 20.4 ; April 25. ; May, for 26 years, 22.1 ; June for 25 years, 17.1 ; July, for the same period, 18.5 ; August, for 26 years, 19.1 ; September for 24 years, 17.2 ; October, for 25 years, 19.2 ; November, for 24 years, 20.0 ; December, for the same period, 20.0, clear days. For spring, the average is 63.7 ; for summer, 55.1 ; for autumn, 56.4 ; for winter, 59.8 ; and for the year, 235 clear days out of 365, leaving 130 days in which the sky was more than half covered with clouds, and on some of which rain has fallen. In January there has been an average of 6.6 rainy days ; in February, 3.6 ; in March, 5.7 ; and in December, 5.4 rainy days, and these constitute the four months in which visitors are especially interested. In these months we have had an average of 21.3 rainy days out of 121 days.

TOPOGRAPHY.—In its topography Florida presents no mountains and no elevated plateaus exceeding 300 feet above the sea,

by which it is bounded on all sides, except on its northern border. But it is not, as many times represented, a low, flat, marshy country, for in many portions its surface is undulating and rolling. Its area covers 59,248 square miles of pine land, oak hammocks, flat savannas, numerous clear, fresh water lakes and rivers, which add beauty to the landscape, comfort, pleasure and subsistence to the inhabitants in their vicinity, for most of the two latter are liberally stocked with fine varieties of fish. Many of our springs and small lakes even are artesian and rise from the strata of rocks upon which the arable soil is based, and pour out copious streams of water to augment the volume of our rivers, which discharge into the sea. The probable sources of these are in the higher land, on our northern border, and are supplied by the rainfall of neighboring States. The state is in some portions traversed by subterranean streams of considerable size, whose course, in many instances, is marked by the line of funnel-shaped sinks, where the sand above the rocky strata has filtered down through abrasions of the rocks, and has been carried off by the current beneath, leaving the sinks, at the bottom of which water is always present, and in many of which fish are abundant. Many of these extensive fountains are mineral—sulphur, iron, magnesia, lime, etc., being the constituents. There are but few extensive marshes in the State. At the sources on the summits are often found savannas, covering many acres, but they do not, like the marshes and savannas in many other countries, consist of deep alluvial deposits, which have been brought down from higher elevations, because these are the summits themselves, from which the water supply of the rivers come. This is a peculiarity in Florida. That larger area on the lower end of the peninsula and known as the Everglades, and covered by water, is by many supposed to be marshy; but such is not the fact, for it is simply a shallow lake, elevated above the ocean some ten or more feet, surrounded by a rocky rim, with a sandy and rocky bottom, con-

taining clear, fresh water, which is discharged through fissures or apertures in the rocky rim into Key Biscayne Bay, and through outlets on the west side into the Gulf. At the north of the Everglades is Lake Okeechobee, the largest body of fresh water in the interior of the State. It is fed by the Kissimee river, whose source is in the same savanna or summit level which is the source of the St. John's river. Its outlet is into the Everglades. Interspersed through this savanna, and at the head of the Oclawaha river, are numerous lakes, which, by modifying and equalizing the temperature, render the country around their borders peculiarly adapted to the culture of oranges and other tropical fruits, while at the same time the residents enjoy good health both summer and winter.

RAINY SEASON.—Our so-called rainy season, though sufficiently marked to warrant the designation most years, is not always so well defined. It generally embraces a period of about sixty days, and ordinarily commences about the middle of June, and terminates about the middle of August, but it oscillates from May to September. Sometimes the rainy season apparently commences, and perhaps daily showers will occur regularly for one or two weeks or more, and then, perhaps, weeks of clear, settled weather will be interpolated, and the rainy season will come on again and continue, so that about the usual complement of rainy days will occur. During the rainy season the rain is by no means continuous, but comes in showers of from a half to one hour or more in continuance, and between the hours of from 1 to 4 P. M., sometimes, but not always, attended with thunder and lightning.

Before the shower, the atmosphere may be hot and sultry, but afterwards the sun shines out, the air is pure, cool, and refreshing. The showers generally come with such regularity that they need not interrupt business, labor or pleasure, only during their continuance, for timely preparation to avoid them can be made if desired.

HEALTH.—As to the subject of miasmata, we have nothing in Florida to render it the cause of disease more than in any country north of us, where new soil is turned up to the air and sun. The heat which we have does not seem to generate anything of the kind here. Florida is, happily, free from many of the diseases which are prevalent elsewhere.

AREA AND POPULATION OF THE ITALIAN PENINSULA.—The Italian peninsula contains 58,394 square miles, and has a population of 11,875,487 people.

A reference to the maps of the Peninsula of Italy and the Peninsula of Florida, will show the almost exact similarity in their geographical formation. In climate they are the same, excepting that the Peninsula of Italy is traversed by a mountain range while Florida is not. This topographical difference makes the central or mountainous region of Italy colder than any portion of the Peninsula of Florida.

CHAPTER VIII.

PRODUCTS OF THE FORESTS.

LUMBER; VALUE OF TIMBER; LIVE OAK; OTHER TIMBER; TRANSPORTATION OF LUMBER; ESTIMATE OF THE VALUE OF YELLOW PINE; NAVAL STORES.

LUMBER.—The supply of valuable timber along the entire line of the Great Southern Railway is inexhaustible. Seven-tenths of the line in Georgia is through a virgin forest of the most magnificent yellow pine in the world. The timber is large, high, and of the finest quality. It is fitted, by its size, growth and quality, for masts, spars, square timber, timber for ship building, house building, cabinet ware, and indeed for all purposes for which the finest quality of yellow pine can be used.

VALUE OF TIMBER.—One cannot conceive, unless familiarly acquainted with the country, how extensive and how valuable the timber of the Georgia and Florida pine forests is, wherever lines of transportation are opened, and it is made available. Thousands of millions of feet may be cut and taken from along the line of this railway, either in Georgia or Florida, and no material diminution of the vast forests be seen, or the supply materially reduced.

For a full century the lumbermen have been drawing from the banks of the several rivers, and supplying the markets of Europe, the United States, the West Indies, Mexico and South America, with the masts, spars and yellow pine of Georgia and Florida. Yet, even on these streams the supply is by no means exhausted. Indeed, the cutting has advanced so far only as to make the expense of drawing logs to the streams by horse power too great, while the great forests a short distance away from the river are left untouched.

The manufacture of hewn timber and lumber is extremely lucrative, and along the line of every railroad in Georgia, Florida,

and Alabama, saw mills spring up as if by magic. All the railroads of these states are doing a large and lucrative business in the shipment of lumber to the ports of their several termini.

But this is not all the profits of railroads accruing from the manufacture of lumber. Experience has shown that railroad transportation of logs, in taking them to the mills, is cheaper than transportation by horses, mules or oxen. On most of the roads in these states trains are run daily for the sole purpose of transporting logs to the mills and lumber to the seaboard.

Several extensive mills are now established upon the line of this road, and a large proportion of the logs for this lumber is now carried over the Jacksonville, Pensacola and Mobile road, or over short temporary railroads built by lumbermen for the sole purpose of transporting logs to these mills.

This road will open an entirely new field for this work, and a field which no man now living can see exhausted, but which each year grows more lucrative as the facilities become greater. Six hundred miles of the line of this road lies through this virgin pine forest.

LIVE OAK.—In the southern portion of Georgia the Live Oak forests are extensive; while in all the peninsula of Florida the Live Oak forests are the most extensive, and of the greatest value of any in the world.

So valuable are they that the Government has selected and reserved from sale large tracts of this live-oak land, for the exclusive use of the Navy.

These forests have been for the most part absolutely inaccessible. By this road they will be opened through their whole extent. Lumbermen will at once take advantage of this ready means of access, and quick transportation. The profits from this source will be large, and the advantage to the ship building interests, both of Europe and America, great.

OTHER TIMBER.—Along the whole line of this Railway there

are many other valuable timbers which enter into all branches of mechanical industries in which woods of any kind are used—the cypress, red bay, palmetto, magnolia, and many other kinds of wood especially valuable for cabinet ware, and by this road they will be made available.

Florida is, beyond question, the best timbered State in the Union. On all the least moist and more level portions, the pine is the prevalent forest tree—either the yellow or the pitch-pine. It grows with great beauty, and attains a large size, furnishing some of the handsomest pine lumber to be found in the markets of the world. The extent of the fine lands, and the possible amount of lumber that could be manufactured, would be incredible to one who has never visited the State. There are probably more than 30,000 square miles of heavy pine forest within its limits.

In the moisture lands an almost infinite variety of trees are to be found, of which the more valuable for timber and lumber are live oak, white oak, the hickory, the ash, the birch, the cedar; the magnolia, the sweet bay, and the cypress. Of all these varieties a great abundance is to be found throughout the State. The supply for any purposes of manufacture may well be said to be inexhaustible. The larger proportion of what has loosely been called swamp in Florida is simply low hammock land, with a soil of inexhaustible fertility, and covered with a dense growth of mainly cypress, magnolia and sweet bay.

The timber of the magnolia is susceptible of a variety of uses. It can be brought to a fine polish, and is used for the nicer and finer kinds of wheelwright and cabinet work. Of this timber the supply is very large.

The wood of the red or sweet bay, in fineness of texture and in its other valuable qualities, stands next to mahogany, and is in demand for cabinet work.

The resources of Florida in the direction of the manufacture

of wooden ware, and of tools of all descriptions made from wood, have not only never been developed, but have hardly been suspected. If an inexhaustible abundance of material, at the cheapest possible rates, and very great accessibility, are of any value and importance in promoting the success of wooden manufacture, then this bids fair to become a leading industrial pursuit in this State.

TRANSPORTATION OF LUMBER.—Experience has shown that many of the roads in the yellow pine districts of the South have paid, by the transportation for logs, timber and lumber, all the running and current expenses for their entire traffic.

No other road in all the country offers so great inducements in this branch of business. The magnificent forests through which it runs, the ability to carry either logs, timber or lumber to navigable waters at so many points, thus avoiding too great expense to the lumbermen, combine to make it certain that this road will be superior to any other in this speciality.

ESTIMATE OF THE VALUE OF YELLOW PINE.—A report of the War Department on the survey of the Choctawhatchie River, West Florida, Col. J. H. Simpson, U. S. Engineer, in charge, made to Congress, April 17, 1872, in estimating the resources of the country adjacent to the river, makes an estimate of the yellow pine timber, and the distance which logs can profitably be hauled, as three and a half miles, and the value of the timber at an average of forty-five dollars per acre.

The line of this road runs through an unbroken yellow pine forest in every respect equal to that on the Choctawhatchie River, for more than six hundred miles. Estimating it at 600 miles there is a frontage on both sides of the road, of 1,200 miles. Three and a half miles on which timber may be drawn to the road on either side, gives 4,200 square miles, or 2,688,000 acres covered with yellow pine and available to the road. This 2,688,000 acres at forty-five dollars per acre gives \$120,960,000, as the value of the yellow pine available.

Col. Simpson gives another estimate in which he states that the best authorities give five miles at which timber may be profitably hauled. This would greatly increase the other estimate.

Extract from the Report of Charles F. Smith, Civil Engineer, on that portion of the line between Jesup, Georgia, and Jacksonville, Florida :

The vast amount of business that out of necessity must grow out of the immense slope of timber in the yet untouched forests of the South, especially of Georgia and Florida, is scarcely dreamed of even in the Northwest where the approaching timber famine is already inducing very serious apprehensions, concerning a supply for the present even, not to figure on a future not far distant.

The importance of this single branch of trade as a source of revenue to the Great Southern Railway is no small item. Of the ninety-one miles between Jesup and Jacksonville, eighty-five miles is through a dense forest of yellow pine, with easy access by hauling with teams for three miles on either side, making 510 square miles or 360,400 acres of land lying adjacent to and along the line of the road, between the points above named ; all of the logs and lumber from this land will necessarily find transit over the road.

At the very lowest estimate made by Mr. Smith, there is 816,000,000 feet, and at the present rates, freights on logs and lumber, over this short space of the road, would amount to \$4,080,000. Another thing which is not generally known in the North and Northwest, and which is a fact abundantly proven by very many years experience, is that when these lands are once cleared of their large timber, the growth is so rapid that it replenishes itself to its full capacity of timber for sawing in fifteen years. Thus Mr. Smith says, from this land alone an annual crop of lumber may be taken of 163,000,000 feet.

This is of especial importance because of the growing scarcity of timber at the north and northwest, as the southern market will

increase in an equal pace with the northern scarcity. A very large proportion of the yellow pine lumber of the south seeks a foreign market. The various connections of this road with the navigable waters of the Satilla, Saint Mary's and Saint John's Rivers which it crosses or touches, and the ports of Savannah, Brunswick and Fernandina, which are reached by short sections of railroads crossing this—these advantages in the shipment of logs and lumber very greatly enhance the value of the road, and of the timber itself by so easily carrying it to sea-going navigation.

NAVAL STORES.—On every completed railroad in the yellow pine districts of the South the production and manufacture of Naval Stores has become of great moment, and is everywhere lucrative. Very important improvements have been made in the process of manufacture of these stores, in consequence of which the business has already much increased, and is growing rapidly. No locality in the world offers greater facilities for this branch of industry than the line of this road. The very considerable bulk of these stores will furnish the road with a large business and enhance its profits. Many producers are now awaiting anxiously the opening of the road that they may open the turpentine orchards along the line.

The extensive pine forests of Florida already furnish employment to a large number engaged in the production of Naval Stores. The trees in Florida have a much longer running season than those of North or South Carolina. One hand will take care of 12,000 boxes, which will yield 50 bbls. of spirits of turpentine, and 200 bbls. of rosin, in a good season. The business has been yearly increasing, and has been remunerative.

Capt. C. F. Smith, says of that section of the road between Jesup and Jacksonville: "The territory along the ninety miles of this road is well timbered with yellow pine of excellent quality for the manufacture of Naval Stores of all

kinds. Notwithstanding the pressure of the times, the manufacture of Naval Stores is now rapidly increasing along the line of the Florida railroads. New crops, in some ten localities, are being opened along the Florida railroad, and the results already form an important, even a leading feature, in the regular exports from Fernandina. The land along the line of this Railway is well adapted to the prosecution of this important business, and already a number of firms are awaiting the completion of the road to enable them to embark largely in it."

There are 500 miles additional of as good pine forests for the manufacture of Naval Stores on the line of this road as are the ninety miles of which Capt. Smith speaks in his report.

CHAPTER IX.

NAVAL, MILITARY AND MAIL.

POLITICAL RELATIONS ; MILITARY AND NAVAL ; LETTER FROM ADMIRAL PORTER ; LETTER FROM GENERAL SHERMAN ; LETTER FROM POSTMASTER GENERAL KEY ; MAIL FACILITIES ; POSTAL CONVENTION AT FORTRESS MONROE, VA. ; EXTRACT FROM PRESIDENT'S MESSAGE, 1874 ; EXTRACTS FROM THE REPORTS OF THE POST MASTER GENERAL, 1876-1877.

POLITICAL RELATIONS.—The West Indies gravitate toward the United States. The Cuban Insurgents asked recognition, with a view to annexation. San Domingo has asked a participation in our nationality. At different times in our history the Central American States have looked to annexation as the only relief from chronic revolution. Whatever difference of opinion there may be with regard to the policy of annexation, there can be no difference with regard to the increased power and influence in the West Indies such intimate daily communication and such additional commercial facilities will give to the United States. If the iron rail binds the Atlantic and Pacific coasts together, so will the opening of this line of communication in the same way cement Cuba and the other West Indies to us in peace and amity, and indissoluble commercial relations. The road itself will act as a bond of peace between this country and all the nations south of it.

MILITARY AND NAVAL.—The map shows the fact that the terminus of the road commands the strait of Florida at the narrowest point, and places that point in railway connection with the rest of the country. It become thus a more important work for the defense of the country than any work of whatever nature now in contemplation can possibly be.

LETTER FROM ADMIRAL PORTER.

OFFICE OF THE ADMIRAL, }
WASHINGTON, D. C., 24th June, 1878. }

MR. GEO. P. IHRIE,
Washington, D. C.

DEAR SIR :

I beg leave to acknowledge the receipt of the prospectus of the Great Southern Railway from Millen, Ga., to Key West, Fla. I have read it carefully and have noted what it proposes to do.

I think that practically it would prove a very important route ; it will open up a beautiful country, and more than double the travel between the United States and Cuba in one or two years. The construction of this road will be a very important aid to military and naval operations. From information laid before the public, in the last three or four years, it must be seen that our navy is entirely inefficient to protect our coast, or to aid in any military operations against the weakest naval power of Europe, one of which is that of Spain, and if engaged in a conflict with this power, or any other, the beautiful harbor of Key West, which is the Key to the Gulf of Mexico would fall into the hands of the enemy, owing to our not being able to furnish any garrison, or blockade ships with naval stores, heavy guns, military supplies, or torpedoes. It is very common to call the Island of Cuba the Key to the Gulf of Mexico, but it is no more a key than is the Island of Jamaica, or the Island of San Domingo. The real and only key to the Gulf is Key West. Here the largest navy of the United States could rendezvous with perfect safety. With a railroad running from the North, through Florida to Key West, every kind of material could be shipped to that point. Here any number of troops could assemble ready for the invasion of adjacent territory, which troops would be cut off in detail if it was attempted to transport them by sea, for it is very certain, with our

weak navy, we could scarcely depend on it even for a convoy.

This idea of running a railroad through Florida to the Keys, especially to Key West, is no new idea. Military and naval men have often discussed the importance of it. In time of war we should depend very much on torpedoes to defend our bays and harbors in Florida, and I doubt very much if it would be possible, while a stronger enemy's force commands the sea, we could by any means get a large gun, a barrel of provisions, or a torpedo to this important point.

Very respectfully,

DAVID D. PORTER,

Admiral U. S. Navy.

LETTER FROM GENERAL SHERMAN.

HEADQUARTERS ARMY OF THE UNITED STATES, }
WASHINGTON, D. C., July 1st, 1878. }

GENERAL GEO. P. IHRIE,

Washington, D. C.

DEAR SIR:

I have held your letter of June 17, some days, to examine the printed report of the Great Southern Railway, from Millen, Georgia, to Key West, Florida, together with the draft of Senate Bill No. 899, and Mr. Ransom's report thereon. These seem to me so complete that more would seem superfluous.

Such a railroad would undoubtedly serve the important military result of giving us an interior line of rapid communication with the forts at Key West and the Dry Tortugas, which were designed to protect our commercial interests, in the passage between Cuba and Florida.

I have the honor to be

Your obedient servant,

W. T. SHERMAN,

General.

LETTER FROM POST-MASTER GENERAL KEY.

POST OFFICE DEPARTMENT, }
WASHINGTON, D. C., July 9, 1878. }

SIR :

In reply to your letter of the 5th instant, transmitting a copy of Senate Bill 899,—proposing to aid the Great Southern Railway Company to construct a line of railway from Millen, Ga., to Key West, Fla., and asking what advantages would accrue to the Government through this department, from the construction of said railway, I have the honor to inform you that, were such proposed railway constructed and put in operation, postal service thereon would enable this Department to dispense with the steamship service now in operation between Cedar Key and Key West, and afford the means of dispatching the mail from the Atlantic Cities to Key West, and the West Indies with greater celerity and frequency.

The compensation for railway service being fixed by law, and determined according to the grade of service performed, it is impossible to state the expense that would be involved by postal service on the proposed railway, but it is thought it would not greatly exceed the cost of present service by steamship from Cedar Key.

Very Respectfully,

Your Obedient Servant,

D. M. KEY,

Post Master General.

To Hon. JOHN H. MITCHELL,

Chairman Committee on Railroads,

U. S. Senate.

MAIL FACILITIES.—By this route the mails will be carried from New York to Cuba daily, in sixty hours, and to Hayti and San Domingo in thirty-six hours from the terminus of the road. Mails for Central and South America will be from four to six days. The mails from all cities south and west of New York, which are now sent to Cuba via New York, will reach their destination in proportionately less time. The great through mails between the United States and all the West Indies, Central and South America, must go by this line. The advantage thus accruing will be incalculable.

POSTAL CONVENTION AT FORTRESS MONROE, Va., July 26, 1877.—The Chairman of the Committee on Business, submitted resolutions favoring increased postal facilities for Southern cities, the establishment of steam communication between convenient Southern ports and Rio Janeiro, Havana and Aspinwall, and that the Congress of the United States and Postal Department are respectfully requested to afford aid and encouragement to the above designated enterprises by means of liberal mail contracts and such appropriate legislation as may be consistent with the constitutional powers and policy of the Government.

Accompanying the resolutions was a memorial to Congress setting forth the needs of the South, and asking that the following measures be provided for :

The establishment on some substantial basis of the mail contracts of steamship line between Southern seaports and ports of South America, Central America and the West Indies.

The report was adopted unanimously.

EXTRACT FROM PRESIDENT'S MESSAGE, 1874.—The paragraphs below are from the message of President Grant, of December 7, 1874. The subject matter is applicable here, as showing that the attention of Congress was called by the President to the development of commerce with the countries to which he alludes,

and which this road will tend so much to develop, as well as to the necessity of increasing our steamship service :

“The use of the navy in time of peace might be further utilized by a direct authorization of the employment of naval vessels in explorations and surveys of the supposed navigable waters of other nationalities on this continent, especially the tributaries of the two great rivers of South America, the Orinoco and the Amazon. Nothing prevents, under existing laws, such exploration, except that expenditures must be made in such expeditions beyond those usually provided for in the appropriations. The field designated is unquestionably one of interest and one capable of large development of commercial interests advantageous to the people reached, and to those who may establish relations with them.

“A revival of ship building, and particularly iron steamship building, is of vast importance to our national prosperity. The United States is now paying over one hundred millions per annum for freights and passage on foreign ships to be carried abroad, and expended in the employment and support of other people. Beyond a fair percentage of what should go to foreign vessels, estimating on the tonnage and travel of each respectively, it is to be regretted that this disparity in the carrying trade exists, and, to correct it, I would be willing to see a great departure from the usual course of the Government in supporting what might usually be termed private enterprise. I would not suggest, as a remedy, direct subsidy to American steamship lines, but I would suggest the direct offer of ample compensation for carrying the mails between Atlantic seaboard cities and the continent, on American owned and American built steamers, and would extend the liberality to vessels carrying the mails to South American States, and to Central America and Mexico, and would pursue the same policy from our Pacific seaports to foreign seaports on the Pacific. It might be demanded that vessels built

for this service should come up to a standard fixed by legislation in tonnage, speed and all other qualities, looking to the possibility of Government requiring them at some time for war purposes. The right also of taking possession of them in such emergency should be guarded. I offer these suggestions believing them worthy of consideration in all seriousness, affecting all sections and all interests alike. If anything better can be done to direct the country into a course of general prosperity, no one will be more ready than I to second the plan."

EXTRACTS FROM THE REPORTS OF THE POST MASTER GENERAL, 1876-1877. — The Postmaster General in his Report, dated Washington, D. C., November 27, 1876, says :

"The United States postage on mails conveyed to and from the West Indies, Panama, Central America, Brazil, Mexico, Bermuda, Nova Scotia, New Granada, Venezuela, and Honolulu, at the reduced rates established from July 1, 1875, amounted to \$119,617.68, and the cost of the sea conveyance thereof was \$45,436.79."

The Postmaster General in his Annual Report, dated November 9, 1877, says :

"The negotiations for postal conventions with Peru, Victoria, and Chili, referred to in the last report, have been unsuccessful ; but it is hoped that improved postal facilities will soon be established with those countries by their adhesion to the General Postal Union treaty. There is no portion of the world with which the United States has as unsatisfactory mail arrangements as with South America. The correspondence for Brazil and other countries on the east coast, in the absence of any regular, direct mail-steamship communication, is forwarded via England ; and the correspondence for countries on the west coast, sent via Panama, can only be prepaid to the ports of debarkation on that coast, with no assurance of its being forwarded to interior destinations, and always leaving a local postage charge, excessive in

amount, to be collected from the addressees on its delivery. The adhesion of all the South American countries to the postal union would greatly liberalize and perfect our postal intercourse with them; and it is hoped that the special effort which is being made by the 'Associated Industries of the United States,' an organization of the leading merchants and manufacturers of the city of Philadelphia, to urge those countries to join the Postal Union may be attended with success."

CHAPTER X.

WEST INDIES.

DESCRIPTION ; GEOGRAPHICAL DIVISIONS ; POLITICAL DIVISIONS ;
COMMERCE.

DESCRIPTION.—The name West Indies is usually given to the vast archipelago of about one thousand islands, lying between North and South America, extending in two irregular lines which unite at Hayti, from the peninsulas of Yucatan and Florida to the mouth of the Orinoco. They enclose the Caribbean Sea, dividing it from the Gulf of Mexico, and from the Atlantic Ocean. They lie between latitude 10° and 28° North, longitude 57° and 85° West, and are divided into four groups. First—The Bahamas, about 500 in number, being a continuation of the coral formation, extending toward Hayti. Second—The Greater Antilles. Third—The Lesser Antilles. Fourth—The Leeward Islands.

The following figures give the area of several of the larger islands and groups, their population, and the population of their capital cities. Hayti, 11,718 square miles ; population, 560,000 ; capital, Port-au-Prince ; population, 30,000. Dominica, 17,172 square miles ; population, 200,000 ; capital, San Domingo ; population, 15,000. Spanish West Indies, 47,130 square miles ; population, 1,832,062 ; capital Havana, Cuba ; population, 130,000 ; San Juan, Porto Rico, population, 30,000. British West Indies, 13,414 square miles ; population, 820,792 ; capitals, Spanish Town, Jamaica ; population, 6,000 ; Nassau, Bahama Islands, population, 7,000 ; Port-au-Spain, Trinidad, population, 12,000. French West Indies, 1,691 square miles ; population, 256,511 ; capital, Point-au-Pitre ; population, 12,000. Netherlands, West Indies, 413 square miles ; population, 38,600 ; capital, Curacao ; population, 7,000. Danish West Indies, 110 square miles, population, 37,137 ; capital, Christianstead ; popu-

lation, 5,500, and Saint Thomas, population, 10,000. Swedish West Indies, 35 square miles; population, 18,000; capital, Gustavia; population, 10,000; Venezuelan West Indies 500 square miles; population, 20,000.

The surface of the West India Islands, is very diversified. The Bahamas, are low and flat, and entirely of a Coralline formation. The Antilles, greater and lesser are volcanic, and from the peaks of a mountain chain, continuous with the Northeast range of Venezuela, and rising in Cuba, Hayti and Jamaica, into summits of from 5,000 to 7,000 feet high, and in many of the lesser Antilles, to the height of from 4,000 to 5,000 feet. In Saint Vincent and Guadaloupe, there are active volcanoes, and Hayti and Jamaica are subject to earthquakes. The Bahamas, being low, are sultry and hot, though for a part of the day, the sea breezes temper the heat. The more mountainous islands have a temperate and delightful climate; especially so, in the highlands. The islands abound in minerals. The copper mines of Cuba, are among the most extensive on the Globe. Gold, silver, alum, copperas, and excellent coal are found on the same Island. Gold, silver, copper, tin, iron and rock salt in Hayti. Lead, copper and salt in Jamaica. Gold, copper, iron, lead and coal in Porto Rico. Asphaltum and coal oil in Trinidad, and salt in the Bahamas.

The characteristic feature of the botany in the West Indies is the great predominance of ferns and archedaceous plants. The forests furnish mahogany, lignum-vitae, grannadilla, rose-wood and other woods of great value for ornamental and other purposes.

The fruits are mostly tropical in their character, and many of them are of excellent quality. The pineapple, cocoanut, pomegranate, mango guava, orange, lemon, lime, bread fruit, and banana, many of them of numerous varieties abound.

Of spices, drugs and dyestuffs, indigo, ginger, pepper, aloes, sassafras, cochineal, logwood, etc., are the principal. Maize is largely cultivated in most of the islands, while tobacco, coffee and sugar are staples in several, and cotton is considerably cultivated.

The animals, birds and reptiles are those of the semi-tropics. On two of the islands only, St. Vincent and Trinidad, are any of the original inhabitants found, and but very few on them—only a few isolated families.

GEOGRAPHICAL DIVISIONS—The Antilles are divided into two groups. The Greater Antilles, including the four large islands, viz.: Cuba, San Domingo, Jamaica and Porto Rico. The Lesser Antilles, sometimes called the Caribbean Islands, number between 700 and 800, though some of them are mere islets.

Geographically, the Antilles extend in a broken line from latitude 10° N., longitude $60^{\circ} 54'$ W. along the southern coast of Florida, nearly to Yucatan, from which it is separated by the channel of Yucatan, with a general trend W. 40° N. through a course of 1,500 miles.

Leeward Islands.—Those islands lying north of 15° N. latitude are known as the Leeward Islands.

Windward Islands.—Those islands lying south of 15° N. latitude are known as the Windward Islands.

Virgin Islands.—Are those lying east of Porto Rico, viz.: Barbadoes, Antigua, Dominica, Saint Lucie, Trinidad, Saint Vincent, Barbuda, Grenada, Tobago and Saint Thomas.

POLITICAL DIVISIONS.—Politically the Antilles are divided as follows :

Independent.—Hayti.

English.—Jamaica, Antigua, Barbadoes, Barbuda, Anguilla, Dominica, Grenada, Grenadines (a part of the Virgin group), Montserrat, Nevis, Saint Christopher, Saint Lucie, Saint Vincent, Tobago and Trinidad.

Spanish.—Cuba and Porto Rico.

Venezuelian.—Margueta, Leticia, Tortuga, Blanquilla, Guadalupe and Iroca.

French.—Guadeloupe, Martinique, Marie Galante, All Saints, Deshaies and part of Saint Martin.

Dutch.—Part of Saint Martin, Araya, Bona Ayre, Curacao, Aruba, Saba and Saint Eustatius.

Danish.—Saint Thomas, St. Johns and Saint Croix.

Swedish.—Saint Bartholomew.

There are very many other islands, the nationalities of which are the same as the larger contiguous islands herein enumerated.

The entire area of the Antilles is 150,000 square miles, and the population is something more than 4,000,000.

Commerce.—The present commerce of the Antilles is \$200,000,000.

CHAPTER XI.

SHIP CANAL ACROSS THE ISTHMUS.

DARIEN SHIP CANAL; PROSPECTIVE COMMERCE THROUGH IT; UNITED STATES; ENGLAND; FRANCE; TOTAL; NICARAGUA SHIP CANAL; COST OF CONSTRUCTION.

DARIEN SHIP CANAL.—The construction of the Ship Canal across the Isthmus of Darien in the near future is now placed beyond controversy. The United States Government has taken an interest in the work, and the surveys made by the government demonstrate its feasibility. It now remains only a question of time when this work will be commenced and completed. This Railway will be the great through line of communication for all the United States with this work; and the transactions and communications of the Government of the United States with it, while in process of construction, and subsequently, will be by this road. The rapidity with which the people of the United States transact business will make this road the main, and almost the sole, means of communication with and through this canal. One thousand one hundred and fifty-five miles of ocean travel and transportation is avoided in direct communication with New York City.

PROSPECTIVE COMMERCE THROUGH IT.—Looking to the future, it is well to call attention more explicitly to the prospective construction of the Canal. All steamers and sailing vessels traversing the Gulf Stream, to and from the canal, will pass within 15 miles of Turtle Harbor, and 40 miles of Key West, and as a result, much traffic will be concentrated upon the road, from vessels putting in at these ports, while a large commerce will seek its passage through the canal from the interior of the United States, via this road.

To illustrate how great the traffic will be through the canal, when completed, we make the following extract from the report

of Commander Thomas O. Selfridge, Commander of the Darien Expedition.

“ The trade through the canal would be ample at the expiration of a year to meet the interest of the debt raised ; and in a few years a sinking fund could be created, to take up the whole amount loaned.”

Table showing amount of trade that would pass through the canal the first year. Compiled from statistics for the years 1867 and 1869.

UNITED STATES.

<i>Countries Traded with</i>	<i>Imports and Exports.</i>	
	1869.	<i>Tonnage</i>
Dutch East Indies	\$2,080,031	13,382
British Australia and New Zealand.	809,037	44,624
British East Indies	9,452,214	107,977
Half Mexico	5,999,997	72,930
Half Central America	2,109,778	41,520
Chili.	3,272,467	49,078
Sandwich Islands	2,083,484	56,603
Peru.	3,059,755	78,429
China	25,584,853	107,884
Half New Granada.	5,186,025	308,220
California.	13,000,000	160,000
<hr/>		
Value of Cargoes.	\$72,637,641	1,040,647
Value ships \$50 per ton.	52,027,400	
<hr/>		
Total value ships and cargoes. . .	\$124,665,041	

ENGLAND.

<i>Countries Traded with.</i>	<i>Imports and Exports.</i>	
		<i>Tonnage.</i>
Half Mexico	\$3,014,005	22,401
Half Central America.	2,642,650	7,625

Half New Grenada.....	8,613,995	11,019
Chili.....	35,004,090	220,771
Peru and Ecuador.....	26,701,825	212,126
China.....	85,975,900	197,288
Java.....	6,812,765	30,703
Singapore.....	17,813,505	123,436
Australia and New Zealand.....	67,475,780	264,815
California and Pacific Islands.....	14,476,700	129,848
<hr/>		<hr/>
Value of cargoes	\$268,531,115	1,219,762
Value ships \$50 per ton	60,988,100	
<hr/>		

Total value of ships and cargoes..\$329,519,215

FRANCE.—The trade of France for the year 1865, amounted to a total value of ships and cargoes, of \$60,839,135. Tonnage 165,259.

TOTAL.—It is estimated by the statistics of 1867, that the total tonnage that would seek the canal would be 3,094,070 tons. Allowing this to be about correct, the canal would have a revenue from

3,064,070 tons at 2.50 per ton.....	\$7,735,075
100,000 passengers at \$10 per head	\$1,000,000
Total revenue, first year.....	\$8,735,075

During the construction of this canal, which is now a fixed fact, in the not distant future, the existence of a railroad to Key West, with an abundance of steamship connections would result in saving many millions to whosoever should build it, and directly and indirectly add many millions to the commerce of the United States.

NICARAGUA SHIP CANAL.

Taken from the report of Commander E. P. Lull, U. S. Navy, Commanding Nicaragua Surveying Expedition, 16th of June, 1874.

The following estimates are from the report of A. G. Menocal.

“ Estimate of the cost of constructing a Ship Canal from the Atlantic to the Pacific Ocean, across the Isthmus in the State of Nicaragua, upon the line surveyed by the Nicaraguan Surveying Expedition.

The total distance from the harbor of Brito, on the Pacific, to the harbor of Graytown, or San Juan del Norte, upon the Atlantic, is 181.26 statute miles, which may be divided as follows :

Inland Canal, Western Division, from the mouth of Rio del Medio, at the Lake, to the harbor of Brito.....	16.33 miles
Middle Division, comprising the Lake navigation from the mouth of Rio del Medio to Fort San Carlos.....	56.50 miles
Eastern Division, from San Carlos at the Lake, to Graytown, slack water navigation, 63.02 ; inland canal, 45.41 =	108.43 miles

COST OF CONSTRUCTION.

Western Division.....	\$21,680,777
Middle Division.....	715,658
Eastern Division	25,020,914
Harbor of Brito, improvement.....	2,337,739
Harbor of Graytown, improvement.....	2,822,630
Total.....	<hr/> \$52,577,718
Add 25 per cent. for contingencies	13,144,429
Grand Total.....	<hr/> \$65,722,147

CHAPTER XII.

INTERNAL COMMERCE.

PRODUCTS OF THE SOIL OF THE UNITED STATES, 1870 ; REPORT OF THE COMMISSIONER OF AGRICULTURE, 1877 ; INTERNAL COMMERCE ; TRANSPORTATION OF GRAIN ; PASSENGERS ; GENERAL TRANSPORTATION ; SHIPMENTS BETWEEN NEW YORK AND SAN FRANCISCO, VIA PANAMA, 1875-1877.

PRODUCTS OF THE SOIL OF THE UNITED STATES, 1870.—As an illustration of how large a proportion of the entire productions of the United States this railway commands, as shown in the accompanying papers, we give the total products of the soil of the United States, as compiled by Hon. S. Shellabarger, from the census of the United States for 1870, and published 1874.

“ The total products of the soil, including farms, orchards and gardens, was, in 1870, \$2,515,592,753. In that year we produced of wheat, 287,745,626 bushels ; of rye, 16,918,795 bushels ; of indian corn, 760,944,549 bushels ; of oats, 288,107,157 bushels ; of barley, 29,761,503 bushels ; of buckwheat, 9,821,721 bushels ; of rice, 73,365,021 pounds ; of tobacco, 262,735,341 pounds, and of cotton, 3,011,996 bales. The total of cereals in 1870, was 1,629,027.6 bushels. The aggregate of the products of our manufactures in 1870, was \$4,232,325,442.

REPORT OF THE COMMISSIONER OF AGRICULTURE, 1877.—The wheat crop of the present year has been promising in a high degree during the entire season. Fears of grasshopper invasions were early dispelled, except in a few counties in Minnesota. The losses from winter-killing, the fly, chinch-bug, grasshoppers, rust, smut, &c., have this season been far less than usual. The heaviest production is in the section of the lightest yield last year, (the Northwestern or spring-wheat States), whose product fell off 36,000,000 bushels. The aggregate in Wisconsin, Minnesota, Iowa and Nebraska is double that of last year, and nearly 20,000,-

000 bushels greater than in 1875. The entire crop promises to exceed that of last year by 70,000,000 bushels, leaving 100,000,000 bushels for exportation, with a surplus remaining above the actual requirement of consumption. Other crops have generally been good. A comparison of the crops of the past three seasons is given, as follows, the figures for the present year being preliminary and subject to revision in completing and perfecting the estimates of the year:

Crops.	1877. Bushels.	1876. Bushels.	1875 Bushels.
Corn.....	1,340,000,000	1,283,827,500	1,321,069,000
Wheat.....	360,000 000	289,356,500	292,136,000
Rye.....	22,000,000	20,374,800	17,722,100
Oats.....	390,000,000	320,884,000	354,317,500
Barley.....	35,000,000	38,710,500	36,908,600
Potatoes.....	140,000,000	124,827,000	166,877,000

Among the "industrial crops," cotton, the most prominent, promised 4,500,000 bales in October, but the weather has since been unfavorable, and may lead to a smaller percentage of production. A bad picking season to the end of December might reduce the product half a million bales.

The tobacco crop promises to be a large one, and may reach a product of 440,000,000 pounds, about 60,000,000 above the estimated product of last year.

INTERNAL COMMERCE.—The following extracts, bearing directly or indirectly upon the location and objects of this road, and the prospective commerce over it, are taken from the *First Annual Report on the Internal Commerce of the United States*, by Joseph Nimmo, Jr., Chief of the Division of Internal Commerce of the Bureau of Statistics of the Treasury Department.

TRANSPORTATION OF GRAIN.—As the Mississippi River will be the great competitor with this road in transportation of freights from the northwest to the tropics, we insert the following extract from the report as showing that water transportation is not necessarily injurious to transportation by rail. The relative importance of the railroads and the Erie Canal may be inferred

from the grain receipts at Portland, Boston, New York, Philadelphia and Baltimore during the year 1876.

Received at—

	Bushels.
New York, } By canal and Hudson River	32,853,829
} By rail.	59,047,953
Portland	3,999,181
Boston	22,753,698
Philadelphia	35,546,845
Baltimore	37,564,536

Total by rail 158,912,213

There appears to have been about four million bushels received at New York "coastwise," which does not appear in the above table.

Almost 95 per cent. of the total receipts of grain at Boston, Philadelphia and Baltimore, were from the Western States, a traffic in which the rail lines compete with each other and with the water-line.

The total receipts by rail and by water including coastwise receipts at the five ports appear to have been :

	Bushels.
By water	32,853,829
By rail	157,912,213
Total	191,766,052

It appears that 17 per cent. of the total receipts was by the Erie Canal and Hudson River, and 83 per cent. by rail. It is to be observed, however, that 13,672,732 bushels of grain received "by lake" at Buffalo were thence shipped by rail. This shows that about 24 per cent. of the shipments from the West were by lake and about 76 per cent. by rail.

Tons of freight received at Saint Louis from the South and of freight shipped from that city to the South, by river and by rail, from 1871 to 1875, inclusive.

Year.	Received		Shipped		Total Receipts and Shipments.	
	By River.	By Rail.	By River.	By Rail.	By River.	By Rail.
1871,	428,935	782,539	636,151	175,634	1,065,086	958,173
1872,	419,070	1,083,600	706,381	262,246	1,125,451	1,345,846
1873,	355,535	1,107,228	681,885	282,593	1,037,420	1,389,821
1874,	264,105	1,020,414	577,395	301,092	841,500	1,321,506
1875,	281,270	1,237,205	499,300	375,716	780,570	1,612,921

Adding receipts to shipments, it appears that the traffic to and from the South by river fell from 1,055,086 tons in 1871 to 780,570 tons in 1875, and that the traffic by rail increased from 958,173 tons in 1871 to 1,612,921 tons in 1875.

PASSENGERS.—The passenger travel between Saint Louis and the South has been nearly all diverted from the river to the rail. The great bulk of first-class travel now goes by rail, it being more expeditious and more certain.

GENERAL TRANSPORTATION.—Shipments from New Orleans to Saint Louis by rail consist of tropical fruits, sugar, molasses, coffee, rice, and fancy groceries (imported). These same articles are also brought by water, and there is no class of goods except perishable, like tropical fruits, that can be said to come exclusively by rail.

Shipments from Saint Louis to New Orleans by rail are inconsiderable, and consist chiefly of live stock and meats requiring quick transit.

The Missouri, Kansas and Texas and the Iron Mountain Railroads have given Saint Louis an opportunity of forcing her trade upon Texas, though she is much farther off than New Orleans. She is not only putting groceries, dry goods, drugs, shoes, hats, and millinery goods, all brought from the East by rail, into Texas, but she is drawing away the grain and cotton. These articles are, for want of railroads to New Or-

leans, taken to Saint Louis, nearly double the distance it is to New Orleans, not because Saint Louis is a good market for them, for she is not, especially for cotton, but simply because Saint Louis has had the enterprise to build railroads and push trade into Texas.

SHIPMENTS BETWEEN NEW YORK AND SAN FRANCISCO VIA PANAMA.—The quarterly report of the Bureau of Statistics of the Treasury Department gives the shipment of commodities between New York and San Francisco via Panama, for the six quarters commencing October 1, 1875, and ending March 31, 1877, as follows :

Shipment of domestic commodities from New York to San Francisco via Panama :

October 1 to December 31, 1875.....	\$1,332,936
January 1 to March 31, 1876.....	1,300,306
April 1 to June 30, 1876.....	775,441
July 1 to September 30, 1876.....	785,514
October 1 to December 31, 1876.....	886,656
January 1 to March 31, 1877.....	896,325

Total six quarters..... \$5,977,178

Shipment of domestic commodities from San Francisco to New York via Panama :

October 1 to December 31, 1875.....	\$758,608
January 1 to March 31, 1876.....	371,597
April 1 to June 30, 1876.....	333,740
July 1 to September 30, 1876.....	366,555
October 1 to December 31, 1876.....	376,898
January 1 to March 1, 1877.....	522,846

Total six quarters..... \$2,730,244

Shipments of foreign commodities from New York to San Francisco via Panama :

October 1 to December 31, 1875.....	\$49,879
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January 1 to March 31, 1876.....	58,990
April 1 to June 30, 1876.....	14,121
July 1 to September 30, 1876.....	0
October 1 to December 31, 1876.....	39,258
January 1 to March 31, 1877.....	46,684

Total six quarters..... \$208,932

Shipment of Foreign commodities from San Francisco to
New York via Panama :

October 1 to December 31, 1875.....	\$3,517
January 1 to March 31, 1876.....	0
April 1 to June 30, 1876....	243
July 1 to September 30, 1876....	0
October 1 to December 31, 1876.....	12,547
January 1 to March 31, 1877.....	538

Total six quarters..... \$16,845

Total shipment of commodities between New York and San
Francisco via Panama for six quarters ending March 31, 1877,
(18 months), \$8,933,199.

CHAPTER XIII.

THE COMMERCE OF THE VALLEY OF THE OHIO AS RELATED TO THE
GREAT SOUTHERN RAILWAY.

SELECT COMMITTEE OF THE SENATE ON TRANSPORTATION TO THE SEA BOARD ; CHARACTER OF INFORMATION ; MAGNITUDE OF THE FREIGHTS FROM THE STATES WEST OF THE ALLEGHANIES ; MIXED LINES OF TRANSPORTATION ; STORMS AND SNOWS OF WINTER ; COMMERCE AND POPULATION OF THE NATIONS SOUTH ; HARBOR OF NEW ORLEANS BEFORE THE CONSTRUCTION OF THE JETTIES ; HARBOR OF SAVANNAH ; COMMERCE OF THE CITIES AND TOWNS ON THE OHIO RIVER ; GRAIN PRODUCED, CONSUMED IN AND EXPORTED FROM THE UNITED STATES ; RESOURCES OF THE VALLEY OF THE OHIO ; VALLEY OF THE MISSISSIPPI RIVER ; TONNAGE ON MISSISSIPPI RIVER.

SELECT COMMITTEE OF THE SENATE ON TRANSPORTATION TO THE SEABOARD.—The information herein is derived, mainly, from the report of the “Select Committee of the Senate on transportation routes to the seaboard,” and from the report of the Chief Engineer U. S. Army.

This report of the Select Committee is the result of the most comprehensive investigation ever made in the United States, of the internal commerce of the nation.

CHARACTER OF INFORMATION.—The information embodied in the following extracts relates only to that commerce, to and from the valley of the Ohio, seeking transit by the quickest and cheapest route to its destination, over this Railway. The statements and the statistics herein given are by the highest authority to which we can go.

We will say, preliminary to what is hereinafter given, that this Railway has two southern termini, viz: Turtle Harbor and Key West. Turtle Harbor being at the southeast of the southern end of the Peninsula of Florida, and Key West being the southwest key of the Florida Keys, and 116 miles south and west of Turtle

Harbor. Turtle Harbor has 27 feet of water over the bar at low tide, and Key West Harbor 32 feet.

Either harbor can be entered by day or by night at all seasons of the year, and in all weathers, by sail or steam, directly from the ocean, without the aid of a pilot or towage. Either harbor being always available for the largest merchant ships and naval vessels of the world. Two harbors more available and more perfectly adapted for the safety of ships, and the facilities of commerce do not exist.

The distance from the Saint Mary's River to Turtle Harbor is 450 miles; from Turtle Harbor to Key West, 116 miles, *i. e.*: from the Saint Mary's River to Key West, 566 miles. These ports are both reached by this Railway, and thus are connected via the Florida Peninsula with the railroad system of the United States. At Jacksonville and Callahan, in Florida; at Waynesville, Jessup and Millen, in Georgia; this road makes connection with the whole system of roads in the country, and is, of itself, a continuous line of road from Millen, Georgia, to Key West, Florida. At Jesup it connects with the Macon and Brunswick railroad, and by it makes its through connections to Louisville, Kentucky and Cincinnati, O. It is this line from Louisville and Cincinnati via Chattanooga, Atlanta, Macon and Jesup to Turtle Harbor and Key West, and connections, that we intend to discuss under this head.

New Orleans, as is shown by the Senate Report, is now the second port in value of commerce in the United States, and even so while it had less than 16 feet of water, at the mouth of the Mississippi River. The city of New Orleans is 510 miles from the port of Key West, by water, thus giving Key West an advantage of 510 miles over New Orleans in ocean transportation, and Turtle Harbor an advantage over New Orleans of 725 miles; and in the latter case all danger to vessels from the Florida Reefs is avoided, as the carriage is made by rail on the line of the Flori-

da Keys. Thus, in point of fact, railroad transportation is carried 510 miles at Key West, and 675 at Turtle Harbor, further south than at New Orleans. From Savannah to Turtle Harbor is 446 miles, and to Key West 557 miles by ocean transportation, thus saving by the Atlantic coast in ocean transportation 446 miles to Turtle Harbor and 557 to Key West, and from the east the dangerous passage of the Florida reefs is also saved, the railroad superseding it. From the port of New York it is 1029 miles to Turtle Harbor, and 1,155 miles to Key West.

The following facts then present themselves. Key West is 510 miles by rail nearer than New Orleans, and Turtle Harbor 557 miles by rail nearer than Savannah to all the West India Islands, to Central America, to the Panama Railroad, to Yucatan, to the islands and coast of the Caribbean Sea, to the northern and eastern coast of the Continent of South America, and via Panama Railroad, the entire western coast of South America, of Central America, of Mexico; and of the United States, and of all the commerce of the Pacific Ocean seeking an eastern market, via the Panama Railroad.

MAGNITUDE OF THE FREIGHTS FROM THE STATES WEST OF THE ALLEGHANIES.—We shall confine ourselves mainly to one subject, or branch of the subject *i. e.*: the magnitude of the freights from the States west of the Alleghanies, and bordering north and south on the Ohio River. The distance from Louisville to Turtle Harbor is 1,127 miles, and Cincinnati about the same; from Louisville or Cincinnati to Key West 1,244 miles. Louisville and Cincinnati are not only the geographical centers, but the commercial centers of commerce of the seven States of the Ohio valley, viz: Pennsylvania, West Virginia, Ohio, Kentucky, Indiana, Illinois, and Missouri. The distances of the principal grain markets of the West by rail to New York are as follows: Chicago, 987; St. Louis, 1,219; Louisville, 997. From New York to Turtle Harbor is 1,029 miles; from New York to Key

West 1,155; from Louisville or Cincinnati to Turtle Harbor 1,127; and Key West 1,244.

The magnitude of the grain trade in the United States is here given from the Senate report.

“The total movement of grain from the Western States, eastward in 1872, was 178,021,462 bushels; and southward 35,000,000 bushels.”

Relative to the exports of grain from the United States southward.

“The markets of the West Indies and South America take about 15 per cent. of the entire foreign exports from the United States.”

The following gives the shipment of grain from the United States for 1873.

Wheat, wheat flour, corn, rye, oats and barley, 1873.

Countries to which Exported.	Bushels.	Per cent.
Great Britain.....	78,313,335	84.1
West Indies, Central and South America	8,596,968	9.3
All other Countries.....	6,107,710	6.6
Total.....	93,018,013	100.

The Railway company will employ a sufficient number of its own ships to transport all freights passing over its road to and from the Panama Railroad, the West India Islands, Central America and the islands and coast of the Caribbean Sea, and the eastern ports of South America.

MIXED LINES OF TRANSPORTATION.—And in this connection, in which mixed lines that is, rail and water will be extensively employed, we insert the following quotation, as showing the extent to which this mode of transportation is carried, and the success which has elsewhere attended it.

The organization of mixed lines, consisting of lake steamers and railroads. The mixed lines are constituted as follows :

The Northern Transportation Company connects with the Central Vermont Railway at Ogdensburg, and is managed by the officers of that road.

The Grand Trunk or Sarina line of steamers runs in connection with the Grand Trunk Railroad, receiving freight at Chicago and delivering it to the railroad at Sarina.

The Western Transportation Line of steamers connects with the New York Central Railway at Buffalo, where its freights, if not otherwise consigned, are delivered to that road.

The vessels of the Union Steamboat Company run from Chicago to Buffalo, where they connect with the Erie Railway.

The boats of the Anchor Line of propellers run from Chicago to Erie and Buffalo, where they connect with the Empire Fast Freight Line and the Pennsylvania and Erie Railways.

The opinion of the committee is that a railroad cannot be injured by competition of water transportation.

“Another result of water lines may be briefly noted here, namely, the incidental increase in the traffic by rail. Perhaps the most successful and prosperous railway in the United States is that which extends nearly 500 miles along the Erie Canal and Hudson River. The business created by the water line creates a traffic in articles which require speedy transport and which can bear rail rates. In like manner the railway passenger traffic is largely increased. While, therefore, the whole country is benefited by the water lines, the railways themselves share in the general prosperity. Instead of there being an antagonism between water lines and railways, they are really helpful to each other.”

STORMS AND SNOWS OF WINTER.—As the roads in the northern portion of the United States are frequently retarded by the storms and snows of winter, and as this railway traverses a country below a parallel of latitude where such storms can retard

the working of the road, we call attention to the conclusions of the Senate Committee, on that subject.

“The General Superintendent of traffic on the Vermont Central railroad, estimates that the cost of transportation in the winter on their road is from 70 to 75 per cent. more than in summer. He states also that in some cases the cost of clearing the track after a single snow storm is greater than the receipts for transportation for freights for a month.

“The master of transportation, on the Baltimore and Ohio railroad, says: The estimated increase cost of transportation, during the winter months, above that of the three summer months, on the Baltimore and Ohio railroad, is from 5 to 20 per cent. ranging according to the character of the power employed, the direction of the traffic, the relative altitude above tide water of the portion of the road carried over, and the severity of the winter.”

COMMERCE AND POPULATION OF THE NATIONS SOUTH.—The extent of the commerce is here shown of the nations of the South to which this railway is the shortest, most direct, safest and cheapest channel of transportation, and which it approaches by 510 miles nearer than any other railroad or any other port in the Gulf of Mexico, and 557 miles nearer than by any other railroad or port on the Atlantic coast.

The committee recommend that the United States secure modifications in the several treaties, in such manner as to insure an increase of the commerce between the United States and these several Southern nations.

“Some idea of the possible development of the trade with these countries and islands may be formed by referring to their statistics of population, our commerce with them, and their total commerce with all other foreign countries.

Population.

Mexico.....	9,175,000
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Central America.....	2,665,000
South America.....	28,259,000
West Indies.....	4,000,000
Total.....	<u>44,099,000</u>

Value of our Imports from, and our Exports to Mexico, Central America, the West Indies and South America.

Countries.	Value of Exports.	Value of Imports.
Mexico.....	\$18,566,154	\$6,430,163
Central America.....	2,238,896	1,347,549
West Indies.....	103,006,026	35,059,372
South America.....	75,988,998	29,641,967
Total.....	<u>\$199,800,074</u>	<u>\$72,479,051</u>

It appears that the balance of trade with these countries during the year ending June 30, 1873, was against us by the sum of \$127,479,051, the value of our exports having amounted to only 36 3-10 per cent. of the value of imports.

But the possibilities of commerce with these countries are indicated by comparing the value of our trade with them with the value of their total commerce with all foreign countries.

Statement showing the Value of the total Commerce, Exports and Imports of Mexico, Central America, the West Indies, and South America with the United States and with all other Countries.

	Value of Total Commerce.	Value of Commerce with the United States.
Mexico.....	\$25,000,000	\$24,696,317
Central America.....	11,500,000	3,586,445
West Indies.....	250,000,000	138,065,434
South America	450,000,000	105,630,966
Total	<u>\$736,500,000</u>	<u>\$271,979,162</u>

Statement showing the Value of the Commerce of Great Britain with Mexico, Central America, the West Indies and South America during the year 1872 :

Countries.	Value of Imports into Gr't Britain.	Value of Exports from Gr't Britain.
Mexico, (in gold).	\$2,158,409	\$4,377,610
Central America.	6,335,866	2,436,067
West Indies.	52,239,930	33,250,137
South America.	128,875,189	123,710,792
Total.	<u>\$189,609,344</u>	<u>\$163,774,606</u>

The total value of the commerce of these countries and colonies, and the value of their commerce, with Great Britain and the United States may be stated as follows :

Countries.	Value in Currency.	per cent.
Commerce with Great Britain.	\$397,560,308	.54
“ “ United States.	272,279,162	.37
“ “ all other countries	66,660,530	.9
Total commerce.	<u>\$736,500,000</u>	<u>100</u>

The lesson which these statistics convey needs no further elaboration here.

With such facts before them, the committee do not hesitate to recommend that our government shall at once adopt measures to establish more advantageous relations with the countries above named, and especially such measures as will tend to increase the amount of our exports of grain and other farm products to them. The improvement of the Mississippi river and the consequent development of a large commerce at New Orleans, will tend to bring us into closer relations with them ; and thereby give to us that share of their trade to which our geographical position entitles us.

HARBOR OF NEW ORLEANS BEFORE THE CONSTRUCTION OF THE JETTIES.—The incalculable superiority which Turtle Harbor and

Key West have over New Orleans, situated as it is 105 miles above the mouth of the Mississippi river, and with less than 16 feet of water on the bar, may be seen when we know that either of the former harbors can be entered from the open sea, day or night, without pilot or towage. The Senate Committee says:

"The heavy tax imposed upon the commerce by the organization known as the Tow-Boat Association, also contributes very largely to the embarrassments of the Mississippi river trade. The president of the Association testified: That the charge for towing in and out is from \$1.40 to \$1.50 per ton, amounting on a 2,000 ton vessel, to \$2,800 to \$3,000 a trip."

The Committee say of the port of New Orleans, and the vast traffic it controls, despite the many hindrances it is subject to:

"And yet, notwithstanding all these disadvantages and embarrassments, New Orleans is in value of her imports and exports the second commercial seaport in the United States, her commerce being surpassed only by New York. In shipping, she is the third port, her tonnage being exceeded only by that of New York and Boston; her present commercial rank attained under all these adverse circumstances, indicates the bright future that awaits her."

In this connection the depth of water on the bar, from March 8th, to June 15, 1873 is given.

"Depth of channel at the mouth of the Mississippi river:

Date.	Depth,	Date.	Depth,
	Feet. Inches.		Feet. Inches.
March 8, 1873..	18....00	March 29, 1873..	15....00
" 10, "	..18....00	May 2, "	.. 17....00
" 12, "	..16.... 6	" 6, "	.. 17....00
" 15, "	..16....00	" 18, "	.. 17....00
" 22, "	..17....00	June 15, "	.. 17.... 6
" 26, "	..16....00		

HARBOR OF SAVANNAH.—The official statistics of the depth of water in the Savannah river, at and below Savannah, will be appropriate here.

The following is taken from the report of the Chief Engineer, U. S. A., of October 12, 1872.

The city of Savannah is located on the Savannah river, 18 miles above the mouth.

“ The present depth at mean low water on the bar at the mouth of the Savannah river, is about $18\frac{1}{2}$ feet with a mean rise and fall of 7 feet.

The mean rise and fall of tide, at the city of Savannah, is $6\frac{1}{2}$ feet. Vessels drawing 22 feet of water can cross the bar on the top of the flood, without striking when there is a considerable sea on, and in calm weather a draft of $23\frac{1}{2}$ feet, as a maximum can be safely carried over. In spring tides this may be increased to $24\frac{1}{2}$ feet, but in neap tides, must be limited to $22\frac{1}{2}$ feet. To enable this draft to be carried to Savannah on the flood tide, would require a depth at mean low water of $17\frac{1}{2}$ feet.

The present channel is only 10 feet deep at low water, in several places and for considerable distances, so that $7\frac{1}{2}$ feet of dredging is necessary to enable the largest vessels that can cross the bar to make the wharves of the city. The length of channel in which dredging would have to be made, is about 11 miles, or two thirds of the entire distance from Tybee Roads to the city.”

Notwithstanding these hindrances at the Harbor of Savannah, the large commerce the city enjoys is shown by the following summary from tabular statements, given in the report of Gen. Humphreys, above named. The full tabular statements are too lengthy to copy, and only the footings or totals are given.

Value of imports brought from foreign countries into the customs district of Savannah, Georgia for the year 1871, \$900,355. The value of exports to foreign countries from Savannah, Georgia for 1871, \$20,026,795. The number of vessels and ton-

nage engaged in the coastwise trade, entered at Savannah for 1871, vessels, 465 ; tons, 323,198. The number and tonnage of vessels engaged in the coastwise trade cleared from Savannah, for 1871, number of vessels, 505 ; tons, 327,171. The number and tonnage of foreign vessels entered from foreign countries into Savannah for 1871, number of vessels, 93 ; tons, 56,820. The number and tonnage of foreign vessels cleared for foreign countries from Savannah for 1871, number of vessels, 131 ; tons, 79,402. The number and tonnage of American vessels entered into Savannah from foreign countries for 1871, number of vessels, 52 ; tons, 33,228. The number and tonnage of American vessels cleared for foreign countries from Savannah for 1871, number of vessels, 79 ; tons, 55,505. The cotton, lumber, domestics, wool, hides, and rice, shipped from Savannah to ports within the United States for 1871, was, cotton, bales, 116,960 ; lumber, m. feet, 12,836 ; domestics, bales, 4,477 ; wool, bales, 1,502 ; hides, 68,524 ; rice, casks, 8,211."

COMMERCE OF THE CITIES AND TOWNS ON THE OHIO RIVER.—The magnitude of the internal commerce of the country, seeking an outlet and market, directly north and South, may be in a degree comprehended, by the committee's statement given below.

"An idea of the magnitude of this commerce, may, however, be formed, when it is considered that the value of the commerce of the cities and towns on the Ohio river amounts to the enormous sum of \$1,353,000,000. The national Government has provided no means of arriving at a knowledge of such important facts, as this, in regard to the internal commerce of the country."

In this paper we have given Louisville, Kentucky, and Cincinnati, Ohio, as the centres of commerce of the valley of the Ohio, and as the cities to which this railway has its nearest and most direct connection. We have given the distance between Louisville and Cincinnati and the southern termini of the road. We will now give the Senate Committee's statement of the com-

merce of the cities on the banks of the Ohio River, Louisville and Cincinnati being the great centres of the traffic and commerce of all the territory designated.

“The Ohio River, from Pittsburgh to its mouth, at Cairo, is 967 miles in length. Six States border upon it, viz. : Pennsylvania, West Virginia, Ohio, Kentucky, Indiana and Illinois, and the territory embraced by it is 214,000 square miles. An elaborate statement of the commerce of the cities and towns of the Ohio River was prepared in the year 1868, by Milner Roberts, U. S. Engineer which statement is here presented, with certain modifications in relation to the cities of Pittsburgh, Cincinnati and Louisville, which are based upon the statistics of trade of these cities during the year 1872 :

Pittsburgh, Pa.	\$30,000,000
Wheeling, W. Va.	30,000,000
Pomroy, Ohio.	8,000,000
Ironton, Ohio.	5,000,000
Steubenville, Ohio.	8,000,000
Portsmouth, Ohio.	12,000,000
Maysville, Ohio.	8,000,000
Ripley, Ohio.	5,000,000
Cincinnati, Ohio.	518,000,000
Madison, Ind.	12,000,000
Jeffersonville, Ind.	5,000,000
Louisville, Ky.	424,000,000
New Albany, Ind.	15,000,000
Evansville, Ind.	12,000,000
Wabash River.	15,000,000
Smithland, Ky.	30,000,000
Paducah, Ky.	40,000,000
Cairo, Ill.	20,000,000
354 other points.	156,000,000
Total.	<u>\$1,353,000,000</u>

These statements are the best that could be obtained. It is probable, however, that the total value here stated is less than the actual value of the commerce of the towns mentioned, as the increase of the population and commerce of the Ohio River has been very rapid since 1868, when Mr. Roberts' report was made. Only an official census could enable the committee to arrive at an accurate statement in relation to the subject."

The committee, speaking of the mineral resources of the valley of the Ohio, and more particularly of coal, says:

"The bituminous coal area of the United States is given at 133,132 square miles in the geological survey, so far as published, while Great Britain, France and Belgium contain but 14,096 square miles, or but a little over one-tenth. Of this 133,132 square miles of bituminous coal deposit, the Ohio states contain 100,000.

The relation of coal to manufactures is too well understood to need comment, to show where the manufacturing population will be in the future. The value of minerals and manufactures, to the wealth of a nation, has been too clearly demonstrated in the national life of Great Britain, to require argument to show what one hundred thousand square miles of coal will be to the seven Ohio States, if only eleven thousand have been of such incalculable value to Great Britain. What food, what transportation then, will not this national workshop need for its workers."

GRAIN PRODUCED, CONSUMED IN AND EXPORTED FROM THE UNITED STATES.—The committee furnish the following statistics, showing the production and amount consumed of grain in the United States, and the amount exported from them:

Statement showing the production of cereals in the United States, quantity consumed, and quantity exported, 1865 to 1872:

Year.	Production. Bushels.	Consumed in U. S. Bushels.	Exported. Bushels.
1865.	1,127,459,185	1,100,178,958	27,280,227
1866.	1,342,570,666	1,309,233,590	33,337,075
1867.	1,329,729,400	1,298,147,835	31,581,565
1868.	1,450,758,900	1,411,070,840	39,388,060
1869.	1,491,412,100	1,458,399,134	33,012,966
1870.	1,629,027,600	1,571,737,079	57,290,521
1871.	1,528,776,100	1,464,070,299	64,705,801
1872.	1,656,198,100		

RESOURCES OF THE VALLEY OF THE OHIO.—The following letter, giving statistics of productions of the Ohio Valley, taken in connection with the fact that this Railway is the only direct line between it and the 44,000,000 people in the nations south of Turtle Harbor and Key West is significant.

Letter addressed to the Chairman of this Committee by Geo. H. Thurston, Esq., of Pittsburg, in regard to the improvement of the Ohio River :

“PITTSBURG, October, 1, 1873.

“SIR,—By the census of 1870, we find that the seven Ohio Valley States had in that year 13,459,377 inhabitants, while the eighteen States having territory bordering on the sea coast had 15,921,352 of a population. In 1830, when the future necessity of the improvement of the Ohio began to be urged, the seven Ohio States had 4,156,033 inhabitants. The eighteen sea coast States had 8,288,651. In forty years, the census of 1870 shows the growth of population in the sea coast States had been but little over 90 per cent., while that of the Ohio States had been a little over 200 per cent. At the same ratio, at the end of another forty years, the sea coast States will have 30,269,189 inhabitants, and the Ohio States 40,258,131. Should the progress of the nation be as great then in the next forty years as in the past, and the indications are that it may be greater instead of less, the seven Ohio States, in population and by analogy of rea-

soning in wealth, will be as powerful an empire in all respects as the whole United States now is. What, then, will be the wants of those States for transportation? What that of the other States of the Union? What should the Ohio River be made in view of this?

But let us look a little into the increase in the wealth of the country of the Ohio Valley during the past twenty years only.

In 1850, the valuation of property, real and personal of the seven States of the Ohio was \$2,089,002,652: in 1860 it was \$5,171,501,897; 1870 it is given in the census at \$10,726,839,301. The valuation of the whole United States was only \$30,068,518,507. In the eighteen sea coast States the valuation in 1850 was given at \$4,324,577,745; in 1860 it was stated at \$8,030,198,734, and in 1870, according to the census, it is \$14,229,392,289. From this it would seem the valuation of property in the seven Ohio States has increased in the past ten years over one hundred per cent., and in twenty years over five hundred per cent., while in the sea coast States it has increased only seventy-five per cent. in the past ten years, and about three hundred and thirty per cent. in twenty years, including in that period of time California, with her great mineral development. Under the same ratio of increase as in the past ten years, the census valuation of the Ohio States will be in 1890, or but a little over 12 years from now, over \$32,000,000,000, more than ten times our national debt. This is allowing our increase to be, from 1870 to 1880, the same per cent. as from 1860 to 1870, and from 1880 to 1890, only one-half of that per cent. At the same period, the sea coast States would, under the same ratios, be given at a little over \$30,000,000,000. It will easily be seen from these statistics how soon the seven Ohio States will as much exceed the eighteen sea coast States in wealth as they will in population.

The improvement of the Ohio is not merely a question of the transportation wants of the 13,000,000 people inhabiting now

the seven Ohio States, which property valued now at \$10,000,000,000, important as the question is under such figures; but it is a question of twelve years, of over 25,000,000 of, sectional population, and \$80,000,000,000 of property.

The dimensions of area of the United States is given at 133,132 square miles in the geological survey so far published. One hundred thousand square miles will be in the seven Ohio States.

How far this magnet of fuel is concentrating in the Ohio States, the manufacturing interests of the nation, the comparative statistics of the number of the manufacturing establishments, and their products, in the 18 sea coast States, and the 7 Ohio States in 1850, and in 1870, indicate. In 1850, there were according to the census, in the 18 sea coast States, 65,273, manufacturing establishments, producing \$639,771,163. In 1860 there were 66,959, producing \$1,121,303,395. In the 7 Ohio States, in 1850, there were 36,277 factories, yielding \$284,452,696, in products. In 1860, there were 49,099 factories, yielding \$568,188,147. In 1870, the census gives 101,580 manufacturing, in the sea coast States, yielding \$2,237,236,305 products, and in the 7 Ohio States, 97,568 factories, yielding products to the value of \$1,408,916,550. From these census statistics, it appears that the increase in the 18 sea coast States, has in 20 years, been 36,307 factories, and \$1,597,465,138 in product. While in the 7 Ohio States, the increase was 63,291 factories, and \$1,124,483,854 in product. It is obvious that the factories of the Ohio States, being of more recent existence, were of less magnitude than the older ones of the Eastern Coast, including the mammoth manufacturing corporations of New England, and of course of less productive capacity. It will be observed that the rates of increase, in the Ohio States, is about 175 per cent. and only about 56 per cent. in the 18 sea coast States, or as, three to one, while the increase in products is only 25 per cent.

less than in the older manufacturing sections. Under the ratio of increase of the last 10 years only, there will be, in the 7 Ohio States in 20 years from 1870, over 250,000 factories. Their productions, taking only the average indicated by the census of 1870 will be \$3,600,000,000, or 50 per cent. more, than the whole imports and exports of Great Britain, to and from all countries.

It is for the manufacturing wants of this wonderful manufacturing empire, surpassing in extent, that of Great Britain, Belgium and France, the three great manufacturing fields of Europe, as seven to one, that the improvement of the navigation of the Ohio river is of such national importance."

VALLEY OF THE MISSISSIPPI RIVER.—The following extract is applicable as showing the immense resources for population, productions of the soil, manufactures and commerce opened by this Road, as its very chief route of transportation. The committee assert in their report that in a very few years the nations south of the United States, judging from their present increase, will contain 100,000,000 of people, and with their most fertile and productive country at one terminus of this Road, and the vast resources of the valley of the Ohio at the other, with no rival line possible, the future of the Road must be almost beyond computation successful. No where in this paper is the imagination drawn upon, but all the statements are from official data, and the future growth of the United States and nations of the south is officially estimated from official statistics of past development and growth.

The valley of the Mississippi, as mentioned below, includes the valley of the Ohio, as its most important territorial portion, in population, wealth and commerce.

"The valley of the Mississippi, which by opening of the water routes, will become connected with the valley of the Saint Lawrence, and tributary to the commerce of the Lake countries, contains 768,000,000 acres of the finest land on the face of the globe,

enough to make more than 150 states as large as Massachusetts ; more territory than the areas of Great Britain, France, Spain, Austria, Prussia, European Turkey and the Italian Peninsula combined. If peopled as Massachusetts is it would contain five times the present population of the United States, and as France is, would hold as many people as the whole area of Europe contains, and as Belgium and the Netherlands are, with not the same danger of famine, it would contain 400,000,000 souls, largely more than one-third of the population of the world."

In the report of the Senate Committee the assertion is several times repeated that 37,000,000 bushels of grain are required for the domestic consumption of the Southern States. This railway passes through the centre of these states, and will carry a larger per centage of this enormous amount of grain to the consumers than any other single road.

TONNAGE OF THE MISSISSIPPI RIVER.—On the 17th day of August, 1877, Hon. John Sherman, Secretary of the Treasury, said in his speech at Mansfield, Ohio : "The entire tonnage passing any given point of the Mississippi River, is now estimated to be 3,000,000 tons per annum."

CHAPTER XIV.

COMMERCIAL RELATIONS, 1877.

ARGENTINE REPUBLIC; PORT OF BUENOS AYRES; BRAZIL; CENTRAL AMERICA; CHILI; UNITED STATES OF COLOMBIA; HONDURAS; PORTO RICO; SOUTHERN COMMERCE.

The following extracts are taken from a "letter from the Secretary of State, transmitting an annual report upon the commercial relations of the United States with foreign nations during the year 1876: giving certain data in the matter of the commerce of the United States with certain countries specified, south of the United States." These extracts show certain facts in regard to our commerce with the nations south of this country, well worthy of consideration.

The letter is dated Department of State, Washington, March 1, 1877, and signed HAMILTON FISH.

ARGENTINE REPUBLIC. The increase in the trade of 1875 was principally with England, France, Belgium and the South American States. Trade with the United States decreased \$1,572,000 from the amount of the previous year, or about 20 per cent. A large amount of the exports to the United States consisted of dry hides, and of imports from the United States lumber was the leading item in value. In 1874, the value of the lumber imported from all sources was \$2,932,160, of which \$2,189,403 was from the United States, and in 1875 the value was \$2,071,974, of which only \$1,316,570 was from this country. Of more than \$17,000,000 worth of woven goods imported in 1874, the United States does not appear to have furnished over \$40,000 worth, and but little of the material imported of the value of over \$11,000,000 for use in the construction of railroads, telegraphs, tramways and other public works. Of more than a million dollars worth of boots and shoes imported, only \$2,000 worth was

from our shops and factories. Yet, of the principal articles of import into the Argentine Republic, such as grain and provisions, iron, steel, and hardware, and woven goods, not including the finest, the United States might contribute an abundance, and in some instances apparently at cheaper rates than other countries.

PORT OF BUENOS AYRES.—From the table given it will be seen that the total number of arrivals and departures of steamers trading with foreign ports during the year 1875, amounted each way to 975, with a total tonnage of 510,758 tons each way, representing more than one-half of the entire tonnage of the Argentine Republic.

The following table shows the flag which these steamers carried.

Nationality.	Number.	Tonnage.
German.....	23	50,807
Belgium.....	4	6,027
Brazilian.....	59	9,708
Spanish.....	2	1,721
French.....	161	107,836
British.....	295	220,673
Italian.....	27	23,173
Argentine.....	225	45,693
Norwegian.....	4	4,029
Uruguayan.....	175	41,092
United States.....	00	00
<hr/>		<hr/>
Total.....	975	510,746

These steamers during the year made twenty-four voyages to Germany, fifteen to Belgium, forty-seven to Brazil, three to Spain, four hundred and fifty-eight to Uruguay, sixty-eight to France, one to Holland, one hundred and fifty-nine to England, forty-two to Italy, one hundred and fifty-seven to Paraguay, one to Portugal, and not one to the United States.

The total foreign commerce, imports and exports of the Argentine Republic for the year 1875 amounted to \$106,097,027 against \$99,065,889 in 1874, and \$116,934,513 in 1873.

The imports for 1875 amounted to \$55,756,627, being \$195,550 less than the year previous. The exports amounted to \$50,331,400, being an increase of \$7,226,688 over 1874.

The exchanges between the Argentine Republic and Europe during 1875 represent 72.13 per cent. of the entire commerce; those with America amount to 21.01 per cent.; those in transitu to 6.56 per cent., and those with Asia 0.30 per cent.

The following are the trade returns with the United States during the last six years:

Trade	1870	1871	1872	1873	1874	1875
Imports	\$2,862,338	2,067,275	3,505,944	5,167,616	3,949,584	3,069,354
Exports	3,827,530	3,709,357	4,312,355	3,032,945	3,747,300	3,055,205
Total	6,689,868	5,776,634	7,518,299	8,200,561	7,696,884	6,124,059

With proper effort this trade might be extended indefinitely and be made to embrace all such lines of staple manufacturers as have a market in the Argentine Republic.

When all the leading countries of Europe are competing for the trade of the Argentine Republic, it is difficult to explain why it is that the United States manifests so much apathy on the subject. The first step towards securing this object should be the establishment of steamship navigation between our American ports and Buenos Ayres.

BRAZIL.—The commercial returns of Brazil are such as to render it impossible to make a satisfactory statement of her commerce and navigation and the interest of the United States therein. Although neither is large, both are increasing, and must become important in many ways to us.

In 1875 the total imports from this country were stated to be of the value of \$7,494,491, of which goods worth less than a half a million of dollars entered under our flag. The export to the United States were \$42,586,665, of which \$18,204,385 clear-

ed in American vessels. In 1876 the imports at Rio Janeiro, consisting mostly of flour and refined petroleum, were valued at \$4,067,940, and the exports 789,304 bags of coffee, at \$17,116,527. There has been no report upon the navigation at Rio for several years. Bahia, Ceara, Maranham, Pernambuco, and Rio Grande do Sul, having less than half the navigation, furnish material for the following statement:

Flag.	Entered.		Cleared.	
	No.	Tons.	No.	Tons.
British.....	623	537,814	660	487,000
French.....	137	130,445	128	122,804
German.....	156	83,217	153	78,927
United States.....	191	108,399	390	78,803
Total.....	1,017	859,875	1,331	767,534

Under the four flags, the United States had 9 per cent. of the ships and 11.5 per cent. of the tonnage. If the navigation of the port of Rio was included, it is probable that the percentage, would not be greatly changed.

CENTRAL AMERICA.—Commercial information for the year, for the five States of Central America, is very limited. In 1874, out of a total foreign commerce of over \$27,000,000, the part of the United States was less than \$6,000,000, and that of Great Britain a little more than six, these nations leading. Until recently British traders have, during more than fifty years, monopolized the foreign trade of the country. Recently ours with it, has slowly increased. Navigation reports for the year show 77 entries of vessels under the flag of the United States, of an aggregate tonnage of 89,778 tons, and the same number of tonnage cleared—nearly double the tonnage under the British, French and German flags. This is due to the fact that the Pacific mail steamers touch twice a month at Central American ports. A large portion of their freight is taken at Aspinwall, however, in British bottoms to our own and other ports.

CHILI.—The trade of Chili for the year 1875, through the ports of Valparaiso, there being little through other ports, amounted to \$72,621,455. The imports were \$38,137,500, of which Great Britain furnished more than \$15,000,000, and the United States a little more than \$2,000,000. The exports amounted to \$34,483,955, of which Great Britain took \$20,000,000, and the United States only \$413,000. The declared exports to this country for 1876 are nearly a million of dollars. In 1874, with a trade of nearly \$75,000,000, the imports from Great Britain were over seventeen million dollars, from France, seven, from Germany over three, and from the United States over two; and of the exports, \$22,000,000 went to Great Britain, \$1,000,000 to France, and half a million to the United States.

Navigation under the flag of this country, no other being reported, is as follows :

	Entered.		Cleared.	
	No.	Tons.	No.	Tons.
1875.....	57	35,083	54	Not stated.
1876.....	49	35,497	45	Not stated.
			Entered.	Cleared.
Value of cargoes, 1875.....		\$1,993,910		\$430,000
“ “ 1876.....		1,638,010		140,000

UNITED STATES OF COLOMBIA.—The foreign commerce of the United States of Colombia decreased considerably in 1875, on account of the disturbed condition of affairs in that government.

The foreign trade for two years and its distribution are shown below, as follows :

Countries.	1874.		1875.	
	Imports.	Exports.	Imports.	Exports.
Great Britain..	\$1,956,381	\$3,343,993	\$2,964,976	\$3,351,821
France.....	1,906,870	1,674,874	2,056,325	1,541,212
United States..	806,644	1,556,506	767,473	1,469,973

Germany.....	676,442	2,635,769	606,783	3,132,530
All others.....	2,872,207	478,710	547,471	488,492

Total.....\$8,218,544 \$9,689,852 \$6,942,928 \$9,984,028

The decrease was 24 per cent. The chief articles of importation were cloths, food articles, salt, wines and liquors, and metal manufactures; of exportation, gold and silver, in dust, bars and specie, tobacco, guano, bark, vegetable—ivory and fine woods; these making in value seven-tenths of the exports.

Navigation under all flags at all ports, excepting Colon and Panama, for 1875, was as follows:

Countries.	Entered.		Cleared.	
	No.	Tons.	No.	Tons.
British.....	234	232,189	232	266,299
French.....	84	54,859	61	50,930
German.....	40	41,221	46	45,554
United States.....	20	12,325	18	15,296
Spanish.....	3	9,000	3	9,000
All others.....	475	19,041	471	18,532
Total.....	856	368,635	831	405,611

The navigation at Colon or Aspinwall has not been reported.

That at Panama, for 1875, was as follows:

Flag.	—Entered and Cleared.—				Total.	
	Steamers.		Sail Vessels.			
	No.	Tons.	No.	Tons.	No.	Tons.
United States...	137	274,893	6	2,436	143	277,329
British	126	143,109	3	3,882	129	146,991
Columbia and S.						
America	40	66,650	3	1,998	83	58,648
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Total.....	303	484,652	12	8,316	355	482,968

The tonnage here represented exhibits the marine activity connected with the Isthmus transit trade on the Pacific side, and

nearly 58 per cent. of it is under the United States flag, and is owned in a single line of steamers. On the Eastern side of the Isthmus the sea-carrying trade is more in possession of other nations, into whose hands a large proportion of the goods are reported to pass. The imports at Panama for the same year are reported as being of the value of \$13,443,000, and the exports the same.

HONDURAS.—The fruit trade with the United States has undoubtedly increased at the rate of $33\frac{1}{2}$ per cent. per year for the last three or four years.

Americans have established a large depot at Hipiona for importation of merchandise from the United States, and it has been made a port of entry, to facilitate their business. Having good communication with the interior, the enterprise bids fair to be the means of introducing American goods and manufactures into the interior of Honduras, heretofore chiefly supplied from British sources.

PORTO RICO.—The total value of imports during the year 1875 amounted to \$0,219,535, against \$3,041,920, in the preceeding year, showing an increase of \$177,615. In imports from the United States, I note a decrease compared with those of last year, which were estimated at \$640,819, while those of the present year cannot be estimated above \$553,180.

Exports during the year amounted to \$3,346,602, against \$3,549,962, in the preceeding year, showing a decrease of \$203,360, chiefly owing to the low prices ruling throughout the year for sugars; the falling off in value of exports of this article being \$139,678, while that of coffee has further increased \$36,455, and represents in total \$1,294,533 more than the first named product.

SOUTHERN COMMERCE.—The foreign commerce of countries lying south of the United States, on the American continent may be nearly estimated to be at the present time \$520,000,000, in val-

ue. in which the United States shares to the extent of \$112,250,000, not over one-third of which is transported under our own flag. This country is a seemingly uninterested spectator of the continuous and slowly successful efforts of its neighbors, whose destinies are involved to a greater extent than are those of other portions of the world with her own, to emerge from traditional hindrances into a development which, for the interest of all, should be in sympathy with hers, and which may properly be influenced to a large extent through the peaceful operations of commerce.

CHAPTER XV.

STATISTICS SOUTHERN COMMERCE.

COMMERCE WITH THE NATIONS SOUTH ; ARTICLES IMPORTED AND EXPORTED FROM AND TO THE WEST INDIES, MEXICO, CENTRAL AMERICA, VENEZUELA AND GRANADA, 1865-1870 ; RELATIVE COMMERCIAL IMPORTANCE OF THE WEST INDIES IN THE COMMERCE OF THE UNITED STATES, 1870 ; TRADE OF THE UNITED STATES WITH THE ISLANDS AND COUNTRIES BORDERING ON THE CARIBBEAN SEA, 1872 ; TRADE OF URUGUAY WITH OTHER COUNTRIES, 1873 ; COMMERCE OF THE UNITED STATES WITH THE PRINCIPAL NATIONS, 1874 ; EXPORTS OF SUGAR AND MOLASSES FROM CUBA, 1875 ; WHEAT AND CORN EXPORTED FROM UNITED STATES TO THE WEST INDIES AND CENTRAL AMERICA, 1830-1876 ; IMPORTS AND EXPORTS OF THE PRINCIPAL SOUTH AMERICAN, CENTRAL AMERICAN COUNTRIES AND THE WEST INDIA ISLANDS, AND IMPORTS INTO THE UNITED STATES FROM THE SAME, 1873-1876 ; TRADE WITH SOUTH AMERICA, 1876 ; COMMERCE WITH CUBA, PERU, COLOMBIA, MEXICO, ARGENTINE REPUBLIC, CHILI, URUGUAY AND BRAZIL, 1876-1877 ; TONNAGE ENTERED AT NEW ORLEANS, 1853-1876 ; REPORT OF THE COMMISSIONER OF AGRICULTURE, 1877.

COMMERCE WITH THE NATIONS SOUTH.—The commerce with the West Indies forms nearly eleven per cent. ; the West Indies, Mexico, Central and South America, nearly twenty per cent. of total commerce of United States ; and all British Possessions on this Continent, only six and three-quarter per cent. of total.

This 20 per cent. of the total commerce of the United States this route will bring directly to our doors, cutting off from two to four days in transportation. Commerce now demands speed. Time is money. The traffic of the roads now running parallel with the seaboard and with the Ohio, the Mississippi and the great lakes, and that of the Pacific Roads, demonstrate this. While bulky and slow freights must continue to be transported

by water, and an annual commerce of \$260,000,000 directly south of the terminus of this route imperatively demands these additional facilities.

But it must be remembered, in considering whether such a rail route can compete with the water route, that the water route practically carries the products of the American tropics far to the northeast, to be afterward retransported to the south and west by rail. This route, on the contrary, brings all the Southern States into direct and close relations with the West Indies, with which their commerce will be carried on directly, without the immense additional cost of transporting it from 500 to 1,000 miles to the North and thence back again to the South. So, also, the Western States will be but little further from Havana, either in distance or time, from New York, and fully one-third of the time and cost of transportation between the Western States and the West Indies will be saved.

The opening of these close relations with the West Indies will rapidly develop a greatly enlarged market for our productions, and will turn to this country a much greater proportion to the vast West India commerce that properly belong to us, but is now diverted to Europe by subsidized steamship lines.

On the commercial importance of the line, reference is made to the official tables of the commerce of the United States given here.

ARTICLES IMPORTED AND EXPORTED FROM AND TO WEST INDIES, MEXICO, CENTRAL AMERICA,
VENEZUELA AND GRANADA.

Value of Chief Articles imported into the United States from the West Indies, Mexico, Central America, Venezuela and New Granada; also the Chief Articles exported from the United States to the same countries during the fiscal year ending June 30th, 1865 to 1870, inclusive:

COUNTRIES.	IMPORTS.									
	Coffee.	Sugar.	Molasses.	Tobacco.	Fruits.	Dyewoods.	Spices.	Cabinet Wood.	Specie	Hides and Skins.
WEST INDIES.	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Swedish W I.....	267	18,485	22,588	.....	3,251	.....	104	.....	16,672	1,863
Danish ".....	19,713	1,179,823	1,128,474	949,063	1,041	.....	5,796	10,965	261,020	79,823
Dutch ".....	79,217	579,974	126,847	8,095	6,436	299,040	386	41,017	608,761	884,659
British ".....	1,046,458	9,303,025	4,560,556	64,597	710,804	1,564,789	271,023	148,128	1,115,771	125,166
French ".....	.....	756,693	68,702	.....	14,857	.....	.....	.....	3,100	.....
Cuba.....	272,388	196,998,497	46,000,563	15,984,848	1,377,905	129,777	22,383	881,218	4,254,705	137,766
Porto Rico.....	143,418	27,810,802	8,502,167	2,774	101,587	12,187	72	10,141	10,129	18,916
Hayti & S. Domingo..	2,539,346	208,046	9,819	9,868	4,898	1,577,634	127	847,835	159,383	94,072
Mexico.....	347,883	192,044	12,519	14,606	105,113	954,573	238,879	640,588	27,217,281	3,230,731
Central Republics.....	2,912,808	474,628	1,181	411	17,357	79,884	.....	59,051	39,430	347,545
Venezuela.....	8,214,214	47,016	2,829	1,337	3,492	54,560	.....	16,251	1,151,564	2,389,017
New Grenada.....	333,995	57,259	208	898,164	99,490	122,795	315	23,587	8,553,478	2,160,277
Total.....	\$16,459,702	237,936,387	\$60,436,443	\$17,318,263	\$2,445,221	\$4,796,297	\$588,885	\$2,178,231	\$38,391,244	\$9,469,984

Exports of Domestic Products in the six years from 1865 to 1870, inclusive.

COUNTRIES.	Butter.	Manuf's of Wood.	Cheese.	Drugs.	Fish Pk'd & Bm K'd	Wheat Flour.	Coal.	Lard and Fork.	Petroleum	Manuf's of Cotton.
WEST INDIES.	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Swedish W. l.....	541	.....	1,515	212	172	16,725	.....	603	49	.....
Danish ".....	197,560	26,866	32,922	69,615	143,064	1,823,956	69,741	476,926	791,783	48,298
Dutch ".....	103,984	19,811	4,441	36,947	35,779	1,927,389	27,149	1,110,380	60,558	33,600
British ".....	727,905	384,212	337,928	315,697	325,021	16,088,560	39,592	5,597,315	941,557	209,833
French ".....	12,438	18,907	2,665	5,486	125,653	913,943	.....	622,994	95,461	9,893
Cuba.....	846,884	909,864	185,686	926,910	355,004	3,943,083	264,003	10,374,473	2,298,869	817,020
Porto Rico.....	259,895	243,019	260,085	133,967	394,725	2,970,901	7,715	2,236,272	206,748	21,729
Hayti & S. Domingo.....	347,929	205,500	152,122	99,553	3,175,345	4,915,594	84,089	5,440,188	136,384	636,177
Mexico.....	191,439	681,970	215,363	708,863	32,501	4,304,976	351,833	975,671	935,763	5,827,313
Central Republics.....	46,348	27,369	20,876	40,054	16,141	390,267	223,546	55,390	86,978	306,725
Venezuela.....	183,564	34,960	16,819	184,286	32,094	1,805,717	4,627	753,542	457,386	61,022
New Grenada.....	655,764	181,191	78,375	997,508	116,904	722,241	940,235	756,627	483,844	2,706,967
Total.....	\$3,573,731	\$2,683,149	\$1,359,277	\$8,525,099	\$4,751,513	\$38,883,414	\$2,012,030	\$28,325,681	\$6,445,390	\$10,738,577

Exports of Foreign Products, from 1865 to 1870, inclusive.

COUNTRIES	Tea.	Drugs.	FireCrack- ers (1865 to 1868).	Fish.	Perfu- mery.	Rice.	Soap (1865 to 1868).	Optum.	Sugar Refined.
WEST INDIES									
Swedish W I.....	\$	\$	\$	\$	\$	\$	\$	\$	\$
Danish ".....	4,881	2,869	2,216	25,610	7,985	1,318	10,548	.....	18,829
Dutch ".....	446	159	5,456	37,405	1,968	.....	4,685	1,211	13,809
British ".....	27,649	14,483	806	30,989	6,026	.....	13	5,493	38,074
French ".....	17,829	.....	.....	2,939	.....	34,571	.....	.....	130
Cuba.....	23,630	169,631	7,365	35,214	56,789	832,232	8,202	1,022,881	2,800
Porto Rico.....	1,636	13,577	6,739	20,899	9,476	226,768	8,107	.....	232
Haiti and San Domingo.....	853	2,922	1,030	503,004	2,974	195,795	21,618	6	278,142
Mexico.....	50,128	206,437	16,777	73,884	14,908	109,542	28,570	35,078	192,498
Central Republics.....	11,613	8,075	1,021	4,818	.....	4,496	96	.....	56,618
Venezuela.....	436	14,399	19,377	1,154	4,285	16,692	4,881	.....	6,605
New Grenada.....	39,719	92,754	3,703	4,430	12,158	38,444	6,957	122,055	370,386
Total.....	\$176,754	\$519,806	\$63,588	\$1,089,541	\$116,518	\$1,007,484	\$93,617	\$1,186,386	\$962,618

BUREAU OF STATISTICS, Jan 31st, 1871.

EDWARD YOUNG, Chief of Bureau.

SUMMARY.

Countries.	Total Exports.	Total Imports.	Total Commerce.
Swedish West Indies.	\$19,817	\$62,729	\$82,546
Danish " " .	3,743,062	3,636,826	7,379,888
Dutch " " .	2,434,625	2,628,432	5,053,087
British " " .	25,194,868	18,910,267	44,105,135
French " " .	1,766,309	843,352	2,609,661
Cuba	22,598,392	266,009,945	288,608,337
Porto Rico	7,021,029	36,612,183	43,633,212
Hayti & San Domingo	16,503,714	4,999,968	21,503,682
Mexico	15,004,464	32,954,217	47,958,681
Central Republics....	1,304,411	3,930,290	5,334,701
Venezuela	3,602,934	11,880,880	15,483,814
New Grenada	8,201,567	7,189,418	15,390,985

Total.....\$107,395,192 \$388,658,507 \$497,143,729

Thus the commerce, in chief articles only, with those countries that lie nearest the terminus of the line, was \$497,043,729.

RELATIVE COMMERCIAL IMPORTANCE OF THE WEST INDIES IN THE COMMERCE OF THE UNITED STATES, 1870.—Official statement accompanying a message of the President to the Senate, dated January 16, 1871, transmitting papers relative to the proposed annexation of San Domingo:

Relative Commercial Importance of the West Indies in the Commerce of the United States for the year ending 30th June, 1870; compiled from returns in the Statistical Bureau of the Treasury Department.

	Imports.	Exports.	Total.
Cuba	\$54,056,415	\$17,412,781	\$71,469,196
Porto Rico	8,183,240	2,955,324	11,138,573
	<u>\$62,239,664</u>	<u>\$20,368,105</u>	<u>\$82,607,769</u>

Hayti and S. Domingo.	979,965	2,801,333	3,780,988
Danish West Indies...	628,870	1,488,399	2,117,269
Dutch West Indies and Dutch Guiana.....	731,973	970,937	2,702,910
French Pos. in America.	467,389	1,167,190	1,634,579
British West Indies...	6,572,555	8,279,627	14,852,182

	<u>\$71,620,106</u>	<u>\$35,075,591</u>	<u>\$106,595,697</u>
Dominion of Canada...	\$39,507,842	23,297,296	62,805,138
All other British Pos- sessions in America..	1,581,959	3,552,028	5,133,987

	<u>\$41,039,801</u>	<u>\$26,849,324</u>	<u>\$67,939,125</u>
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Mexico.....	\$13,099,131	5,875,396	18,974,427
Central America.....	775,673	1,161,695	1,897,368
Colombia.....	5,206,190	4,791,620	9,797,810
Peru.....	2,557,833	3,793,185	6,351,018
Chili.....	773,082	2,245,809	3,019,491
Argentine Republic....	6,414,669	2,479,437	8,894,106
Uruguay.....	1,630,400	1,199,237	2,829,637
Brazil.....	25,178,959	5,817,846	30,993,805
Venezuela.....	2,037,312	1,324,325	3,361,637

	<u>\$57,430,749</u>	<u>\$28,688,550</u>	<u>\$86,119,299</u>
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Total America.....	\$170,140,656	\$90,613,465	\$260,754,120
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RECAPITULATION.

	Imports.	Exports.	Total
Commerce with West Indies.....	\$71,620,106	\$35,075,591	\$106,695,697
Mexico, Central and S. America.....	57,430,749	28,688,550	186,179,299

British Possessions in

North America...	41,089,801	26,849,324	67,039,125
	<u>\$170,140,656</u>	<u>\$90,613,465</u>	<u>\$260,754,129</u>
Tot'l com'rce of U.S.	\$462,377,587	\$529,159,302	\$991,896,889

TRADE OF THE UNITED STATES WITH THE ISLANDS AND COUNTRIES
BORDERING ON THE CARIBBEAN SEA, 1872.

Statement showing the trade of the United States with Islands and Countries bordering on the Caribbean Sea during the year ending June 30, 1872 :

Countries.	Imports.	Domestic Exports.	Foreign Exports.
United States of Colombia,	\$6,589,449	\$4,495,258	\$181,501
Venezuela.....	4,474,201	2,178,388	32,052
Central American States..	1,609,044	1,406,855	71,060
British West Indies.....	9,550,347	8,658,637	138,429
Cuba.....	67,720,205	13,168,958	1,570,010
Porto Rico.....	11,328,681	2,643,155	190,927
Dutch West Indies and			
Guiana.....	1,067,564	789,255	24,946
Hayti.....	1,080,791	2,737,488	204,373
San Domingo.....	437,160	589,259	39,859
Danish West Indies.....	768,167	1,071,504	68,116
French Possessions in			
America.....	2,290,963	1,460,746	37,298
	<u>\$106,916,572</u>	<u>\$39,199,503</u>	<u>\$2,570,571</u>
			39,159,903
			<u>106,916,572</u>
Total Commerce.....			\$148,686,646

EDWARD YOUNG,

Chief of Bureau.

¶ The foregoing statement does not include British or French Guiana, nor any of the commerce that would come over the Panama Railway from the west coast of the continent, which, on shipment from the eastern terminus of that road, is but a few hours run from Key West and this Railway. Thus more speedy and quick transportation will be secured, and the dangers of the passage of the Florida Reefs, as well as high rates of insurance, will be avoided. The statement of Commissioner Young does not include the commerce of Yucatan and Southern Mexico, which is large and rapidly increasing. All of this traffic will find its quickest, safest and cheapest route by the steamers, and over the road of this Company. There cannot be a doubt but that so large a proportion of this commerce will pass over this road that its financial success will be secured from the time it reaches a harbor at the south end of the Peninsula of Florida.

TRADE OF URUGUAY WITH OTHER COUNTRIES 1873.

Statement showing the trade between the Republic of Uruguay and other Countries during 1873.

Countries.	Imports.	Exports.	Total.
England.....	\$6,782,368 70	\$5,336,346 89	\$12,118,715 59
France.....	4,853,570 74	3,206,235 37	8,059,806 11
Brazil.....	1,857,811 31	1,986,553 51	3,844,364 82
United States.	1,445,477 18	1,387,793 25	2,833,270 43
Belgium.....	880,879, 16	1,907,141 59	2,788,020 75
Spain.....	1,170,989 68	41,692 62	1,212,682 30
Italy.....	860,275 01	305,546 44	1,165,821 45
Arg'tine Rep'c	573,680 85	560,309 37	1,133,990 22
Cuba.....	360,102 07	582,545 38	945,647 45
Germany.....	872,761 95	8,665 78	881,427 73
Holland.....	220,094 72	.....	220,094 72
Paraguay.....	55,775 65	22,676 86	78,452 51

Chili.....	74,763 24	3,105 10	77,868 34
Portugal.....	45,182 18	10,620 86	55,802 94
West Ind., not specified.....	.....	25,287 57	25,287 57
India.....	398 70	2,606 60	3,005 30
Peru.....	638 00	2,262 46	2,900 46
Other Ports, not specified.....	1,020,676 90	912,372 67	1,933,049 57
Aggregate.	\$21,075,446 04	\$16,301,762 22	\$37,377,208 26

COMMERCE OF THE UNITED STATES WITH THE PRINCIPAL
NATIONS 1874.

	Imports from.	Exports to.
Great Britain.....	\$168,718,742	\$379,341,890
France.....	60,653,838	50,212,296
Germany.....	40,756,468	64,654,012
Canada.....	35,308,348	40,875,154
Brazil.....	43,327,332	8,551,997
China and Japan.....	24,927,008	3,195,262
British North America.....	371,755	1,647,396
British West Indies.....	4,182,377	8,057,345
Other West Indies.....	4,186,237	3,091,830
East Indies.....	21,574,229	1,466,832
Mexico.....	12,091,998	6,249,163
Holland and Belgium.....	8,782,054	28,624,368
Cuba and Porto Rico.....	82,372,509	24,607,561
All others.....	70,116,231	81,944,410
Total.....	\$577,329,126	\$702,519,526

EXPORTS OF SUGAR AND MOLASSES FROM CUBA, 1875.

Aggregate Exports of Sugar and Molasses from the Ports of the Island of Cuba from January 1 to December 31, 1875.

DESTINATION.	SUGAR.			MOLASSES.			TOTAL.	
	Boxes.	Hhds.	Tons.	Per ct.	Hhds.	Tons.	Per ct.	Tons
United States.....	426,000	628,798	469,216	70.98	263,211	171,087	92.55	640,306
Great Britain.....	466,792	76,840	136,139	20.59	5,453	3,544	1.92	139,683
North of Europe.....	22,008	305	4,370	0.66	.....	.....	.....	4,370
France.....	61,889	6,918	15,936	2.41	.....	.....	.....	15,936
South of Europe	165,962	1,801	32,645	4.94	87	57	0.08	32,702
Other Parts.....	5,550	2,744	2,749	0.42	15,623	10,155	5.50	12,904
Total 1875.....	1,147,701	717,401	661,058	.....	284,374	184,843	.....	845,901
Total 1874.....	1,105,499	660,098	617,655	.....	269,586	175,230	.....	792,885
Increase 1875.....	42,202	57,303	43,403	.....	14,788	9,613	.....	53,016

WHEAT AND CORN EXPORTED FROM THE UNITED STATES TO THE WEST INDIES AND CENTRAL AMERICA, 1830-1876.—Statement showing the number of bushels of wheat including wheat flour exported from the United States from 1830 to 1876, to the countries named.

Year.	West Indies and Cent'l American States.	Brazil.
1830.....	754,880	885,312
1840.....	2,019,840	890,991
1850.....	1,549,866	1,316,088
1860.....	2,209,640	2,259,558
1861.....	2,142,197	1,640,754
1862.....	2,425,628	1,679,859
1863.....	2,828,429	1,839,690
1864.....	3,191,936	1,835,883
1865.....	3,107,501	1,650,780
1866.....	2,174,472	1,332,648
1867.....	1,588,872	751,285
1868.....	2,408,703	1,114,402
1869.....	2,931,741	1,738,814
1870.....	3,435,344	1,692,976
1871.....	3,754,029	2,050,528
1872.....	3,773,858	1,719,972
1873.....	1,441,938	1,840,716
1874.....	1,899,891	2,396,205
1875.....	1,725,293	2,799,255
1876.....	2,490,824	2,680 900

Statement showing the number of bushels of corn including corn meal exported from the United States from 1850 to 1876, to the countries named.

Year.	West Indies and Central America.	Year.	West Indies and Central America.
1850.....	1,656,508	1868.....	874,287
1860.....	795,557	1869.....	915,460
1861.....	878,699	1870.....	968,611
1862.....	1,100,205	1871.....	1,110,493
1863.....	955,937	1872.....	834,094
1864.....	946,957	1873.....	872,977
1865.....	886,128	1874.....	941,734
1866.....	1,034,877	1875.....	671,836
1867.....	827,046	1876.....	504,836

IMPORTS AND EXPORTS OF THE PRINCIPAL SOUTH AMERICAN, CENTRAL AMERICAN COUNTRIES AND THE WEST INDIA ISLANDS, AND IMPORTS INTO THE UNITED STATES FROM THE SAME, 1873-1876.

Countries.	Period.	Imports.	Exports.
Argentine Republic.....	1873	\$71,065,000	\$45,859,000
“.....	1875	55,176,000	50,331,000
Bolivia (estimated).....	1873	2,929,000	4,505,000
“.....	1875	5,600,000	4,870,000
Brazil.....	1872-73	77,327,000	95,261,000
“.....	1873-74	83,244,000	103,385,000
Chili.....	1873	33,945,000	34,561,000
“.....	1875	38,138,000	35,928,000
Costa Rica (San Salvador)...	1873	4,500,000	6,620,000
“ “... ..	1875	2,850,000	4,560,000
Cuba, Port Mantanzas.....	1874	not given	17,339,000
Cardenas.....	1874	“	18,546,000
Sagua La Grande....	1874	“	9,852,000
Ecuador.....	1870	4,225,000	4,388,000
“.....	1874	.....	3,914,000

Guatamala	1868	1,931,000	2,607,000
“	1874	3,054,000	3,189,000
“	1875	2,586,000	3,215,000
Hayti	1872	6,860,000	7,505,000
Honduras	1875	833,000	1,004,000
“ (Estimates)	1873	1,000,000	1,140,000
“ (Estimates)	1874	.....	1,305,000
Mexico	1872	19,993,000	18,630,000
“	1873	29,062,000	31,691,000
Nicaragua	1873	1,153,000	1,585,000
Paraguay	1873	1,148,000	1,100,000
“	1875	566,000	608,000
Peru (Callao)	1875	17,000,000	2,415,000
Porto Rico	1872	not given.	13,928,000
“	1873	“	13,733,000
“	1874	“	11,761,000
San Salvador	1873	2,103,000	3,377,000
United States of Colombia ..	1872-3	12,516,000	10,961,000
Uruguay	1872	19,467,000	15,499,000
“	1874	16,600,000	16,000,000
Venezuela	1870	14,711,000	20,900,000
“	1875	12,000,000	17,000,000

Statement showing the value of Imports into the United States from, and of Domestic and Foreign Exports from the United States to the countries hereinafter named during the fiscal year ending June 30, 1876 :

	Imports.	Domestic Exports.	Foreign Exports.
Central American States	\$1,819,120	\$938,102	\$40,660
Danish West Indies	393,612	805,309	13,498
French W. I. and French Guiana	1,857,668	1,486,925	38,926
British W. I. and British Honduras	3,479,291	8,197,042	223,693

British Guiana.....	1,172,119	1,750,452	41,838
Hayti	3,076,199	4,732,724	105,998
Dutch W. I. and Dutch Guiana.....	679,172	873,546	15,450
San Domingo.....	405,363	679,859	40,554
Cuba	58,817,689	13,746,058	2,303,874
Porto Rico.....	4,305,824	2,099,076	65,794
Totals.....	\$75,924,056	\$35,325,093	\$2,890,294
Total Exports.....	38,215,387		
Total Exports and Im- ports.....	\$144,139,443		

EDWARD YOUNG, Chief of Bureau.

BUREAU OF STATISTICS, August 2, 1877.

TRADE WITH SOUTH AMERICA, 1876.

STATEMENT OF IMPORTS INTO THE UNITED STATES FROM SOUTH AMERICA during the Fiscal Year ending June 30, 1876.

	United States of Colombia.		Venezuela.		Brazil.		Argentine Republic.		Chili and Peru.		All other S. American Countries.
	VALUE.		VALUE.		VALUE.		VALUE.		VALUE.		VALUE.
TOTAL IMPORTS	\$5,697,046		5,875,715		45,458,178		8,602,786		2,196,195		1,932,530
Portion brought in American Vessels	3,008,314		2,649,341		14,345,885		3,290,942		861,236		1,264,454
Portion brought in foreign Vessels	1,889,832		3,226,374		31,107,294		5,311,794		1,334,959		668,085

STATEMENT OF DOMESTIC EXPORTS FROM THE UNITED STATES TO SOUTH AMERICA during the Fiscal Year ending June 30, 1876.

	United States of Colombia.		Venezuela.		Brazil.		Argentine Republic.		Chili and Peru.		All other countries in S. America.
	VALUE.		VALUE.		VALUE.		VALUE.		VALUE.		VALUE.
TOTAL EXPORTS	\$1,916,042		3,424,278		7,258,218		1,510,190		3,334,674		1,120,123
Shipped in American Vessels	3,324,043		2,431,992		4,442,006		1,076,991		2,336,228		457,955
Shipped in foreign Vessels	622,389		992,286		2,811,212		442,199		978,446		662,168

STATEMENT OF FOREIGN EXPORTS FROM THE UNITED STATES TO SOUTH AMERICA during the Fiscal Year ending June 30, 1876.

	U. S. of Colombia (New Granada and Panama.)		Venezuela.		Brazil.		Argentine Republic.		Chili and Peru.		All other countries in South America.
	VALUE.		VALUE.		VALUE.		VALUE.		VALUE.		VALUE.
TOTAL FOREIGN EXPORTS	164,804		57,289		94,162		65,862		72,634		11,470
Portion shipped in American Vessels	118,893		46,113		53,479		60,049		32,915		6,516
Portion shipped in foreign Vessels	45,911		11,186		40,684		5,813		39,719		4,954
TOTAL COMMERCE	9,608,892		3,557,292		52,800,553		5,187,788		5,665,803		3,070,132
Total Commerce with South America							\$35,628,420				
Portion shipped in American vessels							40,402,337				
Portion shipped in foreign vessels							45,166,183				

COMMERCE WITH CUBA, PERU, COLOMBIA, MEXICO, ARGENTINE REPUBLIC, CHILI, URUGUAY AND BRAZIL, 1876-1877.—The following data are taken from the reports of the Bureau of Statistics, published for 1876 and 1877. Imports into the United States and foreign exports from the same, from Cuba and Porto Rico, during the fiscal year ending June 30, 1875.

Imports.

Cuba.....	\$2,480,588
Porto Rico.....	259,757

Foreign Exports.

Cuba.....	5,280,140
Porto Rico.....	11,400

Imports into the United States from CUBA and PORTO RICO during the fiscal year ending June 30, 1875.

Cuba.....	\$66,647,270
Porto Rico.....	6,670,325

Foreign exports from the United States to Cuba and Porto Rico during the fiscal year ending June 30, 1875.

Cuba.....	\$ 6,374,351
Porto Rico.....	108,963

Domestic exports from the United States to Cuba and Porto Rico during the fiscal year ending June 30, 1875.

Cuba.....	\$15,586,658
Porto Rico.....	2,377,757

Merchandise exported to Peru from the United States, Great Britain and France, for the year 1874.

United States.....	\$2,621,906
Great Britain.....	9,149,885
France.....	6,498,610

Merchandise exported to the United States of Colombia from the United States, Great Britain and France for the year 1874.

United States.....	\$ 5,359,344
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Great Britain.....	12,960,780
France.....	4,705,695

Merchandise exported to Mexico from the United States, Great Britain and France for the year 1874.

United States.....	\$6,004,370
Great Britain.....	6,614,380
France.....	4,512,708

Merchandise exported to the Argentine Republic from the United States, Great Britain and France for the year 1874.

United States.....	\$2,633,963
Great Britain.....	15,961,695
France.....	14,775,806

Merchandise exported to Chili from the United States, Great Britain and France for the year 1874.

United States.....	\$ 2,813,990
Great Britain.....	14,462,425
France.....	9,269,970

Merchandise exported to Uruguay from the United States, Great Britain and France for the year 1874.

United States.....	\$1,147,620
Great Britain.....	6,520,780
France.....	5,795,539

Merchandise exported to Brazil from the United States, Great Britain and France for the year 1874. •

United States.....	* 7,705,820
Great Britain.....	40,230,750
France.....	16,658,215

Commerce between the United States and Chili during the year ending December 31, 1875.

Exports from the United States.....	\$2,021,315
Imports in the United States.....	647,515

Total exports and imports with Chili.....\$2,668,830

TONNAGE ENTERED AT NEW ORLEANS, 1853-1876.—The following statement indicates the total tonnage entered at New Orleans, from 1853 to 1876, inclusive:

Year.	New Orleans. Tons.	Year.	New Orleans Tons.
1853.....	511,878	1865.....	50,970
1854.....	492,434	1866.....	228,339
1855.....	435,863	1867.....	253,729
1856.....	663,067	1868.....	326,216
1857.....	612,286	1869.....	381,882
1858.....	583,776	1870.....	458,447
1859.....	659,083	1871.....	566,797
1860.....	632,298	1872.....	501,965
1861.....	68,993	1873.....	222,791
1862.....		1874.....	630,985
1863.....		1875.....	434,006
1864.....	50,588	1876.....	

REPORT OF THE COMMISSIONER OF AGRICULTURE, 1877.—The following are among the articles imported, that can and ought to be produced in the United States, with the value thereof:

Articles.	Quantity.	Value.
ARTICLES FREE OF DUTY.		
Peruvian bark (Calisaya, &c.), pounds,	5,744,765	\$1,293,400
Bark used for tanning.....		184,826
Cork-bark, unmanufactured.....		606,169
Coffee.....	339,789,246	56,788,997
Eggs.....	4,903,771	630,393
Indigo.....	999,139	794,990
Madder.....	2,911,958	151,005
Paper-materials.....	112,447,584	3,854,046
Tea.....	62,887,143	19,524,166
Total.....		83,827,992

DUTIABLE ARTICLES.

Barley.....	bushels..	10,285,957	7,887,886
Barley-malt.....	bushels..	286,930	252,622
Rice.....	pounds..	71,561,852	1,693,547
Hemp.....	tons..	17,979	2,247,540
Jute and other grasses.....	tons..	60,368	2,384,881
Flax-seed.....	bushels..	2,755,726	3,859,496
Silk.....			23,745,967
Straw and palm-leaf.....			1,856,674
Wines.....			4,754,110
Wool, unmanufactured.....		44,642,836	8,247,617
Total.....			56,930,340

The value of sugar and molasses entered for consumption in three years is as follows:

Year.	Values.	Duties.
1874.....	\$92,614,832	\$34,860,278
1875.....	82,209,853	37,157,245
1876.....	75,742,466	41,898,575
	250,567,151	113,916,098
Annual average for three years.	83,522,383	37,972,032

FRUIT AND NUTS.

Currants.....	856,425 62	209,110 61
Lemons and oranges.....	3,412,027 45	682,405 50
Almonds.....	463,106 86	240,207 89
Prunes and plums.....	2,333,949 00	553,660 77
Raisins.....	2,425,277 14	805,526 63
All other fruits and nuts.....	2,424,480 44	624,318 20
	11,915,266 51	3,115,229 60

Thus it will be seen that \$236,295,981, besides the additional expense for freight and commissions, are paid annually for imports, all of which could and should be saved to our people.

The Commissioner says : " Among the imported products of other nations which absorb the capital, retard the industry, and depress the commercial prosperity of the country, that which holds the first importance is the item of sugar, for which we are paying to foreign producers nearly a hundred millions of dollars annually, while we have neglected our natural facilities for supplying our own market and contesting the world's market with this production. Nor ought it to lessen our anxiety in view of this anomalous fact, that, having made freedmen of our slaves, a great portion of the vast amount we thus contribute to foreign industry goes to sustain and support the slave labor of Cuba, a country which takes from us very little, if anything, except gold, in exchange for her abundant supplies of sugar and tobacco.

It is of the greatest importance in the present stagnant condition of the labor and business of the country that the millions of gold thus paid to foreign nations for sugar and other articles of consumption, which habitual use has made necessary for us, and which we have such abundant natural facilities for producing at home, be saved to our people. Every pound of sugar needed for our home consumption can be produced cheaply on our own territory. The saving of the vast amount now expended in the importation of this staple is, however, but one of the important results which will follow its home production."

CHAPTER XVI.

IMPORTED FRUIT.

FRUIT FROM ABROAD; TROPICAL AND SEMI-TROPICAL FRUIT;
OFFICIAL STATISTICS; FOREIGN FRUITS WHICH HAVE BEEN TESTED IN
FLORIDA.

FRUITS FROM ABROAD.—The extent of the foreign fruit importation to this city is far greater than is generally known. Until recently the business was carried on almost entirely by sailing vessels, but the establishment of steamship lines from the various Mediterranean ports to this city has largely increased its volume. The boats of the Mediterranean and New York Steamship Line, which has now been in operation for about three years, and of a line started this year by Italian dealers, are almost entirely given up to this class of freight. Steamers arrive every week or ten days during the fruit season. They make the trip in from twenty to twenty-two days, and the fruit, which is generally in excellent condition, is in great demand. The voyage under sail averages about sixty days.

About 40 per cent. of the fruit brought from Mediterranean ports now come in steamships. Even with this advantage the trade is a risky one, but not so much so as with sailing vessels, liable at any time to long voyages and consequent destruction of cargoes. The shipments of green fruit begin early in the Summer with lemons from Malaga, which last until November, and then continue with the same fruit from Sicily, which comes through the Winter and until June. During the last three years there have been large shipments of Oranges from the Adriatic, which arriving here in good condition, find a ready sale. The shipment of dried fruits is almost wholly confined to the steamship lines, and includes large quantities of raisins from Malaga and Valencia, and currants from Greece. The annual importations reach about 1,000,000 boxes from Malaga, and about £350,-

000 boxes from Valencia, and of the total amount about 85 per cent. is consigned to New York firms. The importation of currants is increasing from year to year, the lower duties stimulating consumption. The importation now reaches nearly 10,000 tons a year, and nearly all comes to this city. The dried fruit traffic alone amounts to about \$4,000,000 a year. Of green fruits arriving by steamship there is an average each year of 100,000 boxes of oranges from Sicily and 75,000 boxes from Spain, together with 50,000 boxes of lemons from Spain, 500,000 boxes from Sicily, and during the Summer from 15,000 to 40,000 boxes from France, according to the crop. The consumption in this city reaches nearly 1,000 boxes daily, the rest going to various parts of the country. The prices vary from \$1.50 to \$6.50 a box for oranges, and from \$2.50 to \$12.50 a box for lemons, according to the season and the supply.—*N. Y. Tribune.*

TROPICAL AND SEMI-TROPICAL FRUITS.—The following is valuable as showing first—the large quantities of fruit imported to the United States; second—the heavy loss sustained by the importers by reason of the long sea voyage; third—the very large savings that would accrue to the importers if the time in which fruits is in transit was reduced to three or four days instead of 6, 8 or 10 days, and often out so long that a whole cargo is lost at sea; and fourth—indirectly showing how great would become the production of these fruits on the Florida Peninsula.

If the West India Islands, Central and South American fruits could be transported from the orchards to the northern markets by fast steamers to Key West, and thence in refrigerating cars, thereby insuring to the producer a sure market, and the importers against loss by delay, by reason of long sea voyages in a tropical and semi-tropical climate, all the fruits mentioned in this article, and many others which are too liable to decay ever to be seen in the northern markets of the United States, but which, by refrigerating compartments on the steamers and refrigerating cars, can

be taken to every city of the United States as fresh as when they were gathered from the trees—as easily, indeed, as fruits are now brought from California to the markets of the east and south in the same manner.

The production of these fruits in Florida will mark a development never yet hoped for, and the importations will keep full pace with their production until tropical fruits will become as common and cheap in the northern markets as the apple of the Northern States.

OFFICIAL STATISTICS.—Below we give a carefully considered synopsis of the foreign fruit trade of New York for a single year, especially prepared by Inspector Bostwick, of the Customs Department :

BOX FRUIT.—“The importation of the box fruit at the port of New York, from the Mediterranean ports, during each month of the year was as follows, viz.: In January, 65,456 boxes of oranges and 22,441 boxes of lemons; in February, 19,525 boxes of oranges and 5,482 boxes of lemons; in March, 73,838 boxes of oranges and 2,455 boxes of lemons; in April 190,051 boxes of oranges and 97,851 boxes of lemons; in May 73,590 boxes of oranges and 52,644 boxes of lemons; in June, 18,355 boxes of oranges and 28,399 boxes of lemons; in July, 5,150 boxes of oranges and 32,308 boxes of lemons; in August, 181 boxes of oranges and 23,302 boxes of lemons; in September 8,946 boxes of lemons; in October, 2,667 boxes of lemons; in November, 827 boxes of oranges and 11,698 boxes of lemons; in December, 27,846 boxes of oranges and 6,226 boxes of lemons. The above comprise 792,372 boxes, of which 474,849 were oranges and 317,523 were lemons. There were 31 cargoes by steamers and 124. by sailing vessels—which shows an increase of 6 cargoes by steamers and 20 cargoes by sailing vessels over the number of importations the previous year, while the number of boxes of fruit in excess of the importations of the same year was only 5,675.

There was also imported from Palermo about 4,000 boxes of mandarines, a variety of small orange, containing from forty to fifty in a box. The percentage of loss was twenty-five per cent. The total number of oranges was 112,462,600, and of lemons 114,408,280. The average percentage of loss on box fruit by decay far exceeds that of the previous, and in fact, was greater than at any period within the last twenty-five years. As a necessary consequence, the losses of importers, in the aggregate was correspondingly large. This heavy loss was mostly confined to that of oranges, more especially on the importations from Palermo during the months of March, April and May, which comprised about one-half of the whole number of boxes imported during the year. The amount of loss is mainly attributable to the length of time consumed in making the voyage which was from 80 to 120 days. It is to be regretted that no better success has attended the efforts of the importers of Mediterranean fruits for the past few years. When we take into consideration the large amount of capital involved in this hazardous branch of commerce, and the not unfrequent and heavy losses sustained by them, we cannot but wonder at and admire their perseverance and courage, which certainly merits a much richer reward than has recently fallen to their lot.

“The trade in West India fruit has proved anything but satisfactory or profitable to the importers and others who were engaged in it during the year, and it may with propriety be here stated, that the above remarks in relation to the Mediterranean fruit trade, and to those who were engaged in it, will apply with equal force to the importers of West India fruit, whose losses during the past two years have also been very large.”

“The importation of oranges from the West Indies during the year consisted of forty-five cargoes, by sailing vessels, from Mayaguez and Ponce, Porto Rico; Kingston, Jamaica; Havana and Baracoa, Cuba; Matanzas, Martinique, Abaco, Harbor

Island, San Domingo and Hayti, comprising 17,816,735 oranges. This includes 19,046 barrels, nearly all of which were imported in steamers from Havana, Kingston and Nassau—a decrease of fifteen cargoes and 4,661,496 oranges under the importations of the previous year. The number of oranges that perished in the voyage, was 9,900,259—equivalent to a loss of fifty-five per cent. The decrease in number of importations of oranges was in nowise owing to the lack of fruit in the West Indies. On the contrary, the orange crop was a bountiful one, but was solely on account of the losses on the importations already made. The number of barrels of oranges per steamers, in excess of the importations of last year, was 9,478.

“The importation of bananas during the year exceeded that of any former year. There were 150 cargoes, of which 143 were from Baracoa; 4 from Kingston, Jamaica; 2 from Utilia, and 1 from Ruatan, Central America; showing an increase of forty-eight cargoes in excess of the importations of 1871. The total number of bunches of bananas imported was 401,670, of which 344,280 were from Baracoa, an increase of 100,000 in excess of the importations of last year from the latter place; 5,686 were from Jamaica, and 3,750 from Utilia and Ruatan. The loss by decay was twenty-nine per cent. There were also imported from Aspinwall, in steamers, 53,640 bunches bananas—an increase of 10,223 bunches in excess of the importations of the previous year from the same place. The loss on these importations was equal to thirty-three per cent. The trade in Aspinwall bananas has materially increased within the past few years. Formerly only a few hundred bunches were occasionally imported in steamers plying between Aspinwall and this city, where now, and for several years past, thousands of bunches are monthly imported.

“The importations of pine apples from Eleuthera, Matanzas, Havana, Nassau, Abaco and Harbor Island, consisted of ninety

cargoes, and comprised 4,190,051 pine apples, showing a small increase over the number imported last year. The number that perished on the voyage was 983,826, being a loss of twenty-four per cent.

“The importation of cocoanuts at this port during the year consisted of 174 cargoes, of which 143 were from Baracoa, and the residue from San Blas, San Andreas, San Antonio, San Domingo, Carthagena, Ruatan, Old Providence and Kingston, Jamaica, and comprised 7,990,041 cocoanuts including those imported from Aspinwall in steamers, of which number 1,036,355 perished on the voyage—showing a loss of thirteen per cent., and an increase of 970,108 cocoanuts in excess of the importations of last year.

“The importation of limes from the West Indies and Aspinwall during the year comprised 537 barrels, of which there was a loss by decay of thirty-six per cent. The number of shaddocks imported last year was only 21,128, on which there was a loss of forty per cent. The shaddock is not a desirable fruit for eating, it is mostly used for making marmalade. The quantity of grape fruits imported was small. The whole number comprised only 13,700, and the loss was thirty-six per cent. The above shows a small decrease under the importation of last year. Of plantains 36,550 were imported during the year, and the loss by decay was thirty per cent. The quantity of pomegranates, mangoes, sapadillas and many—apples something less than the importation of last year. Nearly the whole of them perished on the voyage.

Less than 500 cantaloupe melons were imported from Malaga during the year, thirty per cent. of which perished on the voyage.

This year will long be remembered by many with sorrow and regret as one noted for the great number of disasters which occurred at sea, and which resulted not only in the total destruc-

tion of scores of vessels, but also in the loss of hundreds of the lives of hardy seamen. It would seem to be superfluous to say the perils of the sea were unusually great and almost innumerable, as the fact must be patent to every one who has noticed the passing events of the year. The vessels engaged in the West India fruit trade the past year were, unfortunately, not an exception to the prevailing fatality.

The increased attention paid to the cultivation of many varieties of semi-tropical fruit in certain sections of our own country, within the past few years, has proved not only quite satisfactory but also remunerative to those who have embarked in the enterprise. Comparatively speaking, but few persons are aware of the existence or extent of the numerous orange groves in the States of Florida and Louisiana, more especially in the first named State. Some of them were planted many years since, and others more recently and within the last thirty years. The products of these orange groves for several years past have been abundant, yielding many millions of oranges of an excellent quality. A ready market and remunerative prices were found for the surplus fruit over and above the requirements for home consumption, principally in Savannah and Charleston, only a small portion of it finding its way to the Northern States.

Lemons, of large size and superior quality, are now successfully raised in East Florida, but not in quantities sufficient for export. Other varieties of fruit are also cultivated, such as limes, grape fruit, pomegranates, guava apples, olives, figs, the date palm, Japan plum and pineapples.

From the official records of the Custom House the following tables have been condensed. They exhibit the values of all the green fruit imported from the Mediterranean, the West Indies and Central and South America, as well as the amount of duty collected, and they are, therefore, calculated to give at a glance a correct idea of the extent of the trade of this port in green fruit.

	Value.	Duty.
Oranges and lemons (20 per cent. duty),	\$2,085,879	\$417,175 80
Pineapples (20 per cent. duty).....	159,631	31,926 20
Bananas and other green fruit (10 per cent. duty).....	1500,426	50,014 40
Cocoanuts	158,509	9,993 20
Total	\$2,904,445	\$509,109 60

A comparison of the two sets of figures given above shows an increase of the amount in value of green fruit imported \$314,419, and of duty \$29,070,40, over the amount in value and duty of the imports of green fruit last year. So much for the facts connected with the importation of green fruit at the port of New York. To follow it thence to its destination in various parts of the country would be very interesting, but would exceed the limits the writer has set for himself in the preparation of these yearly statements. It can readily be imagined that the same degree of risk which attends its importation follows the later dealing in this most perishable commodity, although it is undoubtedly true that the risk assumed by the importers is the greatest experienced in the trade, both from the greater amount of their ventures and from the fact that they are subjected to the delays and dangers peculiar to sea traffic.

A thousand oranges may be purchased in Havana for about \$4.75, and their value here may be about \$20 a thousand, but the fruit must be sound when it is sold, so that the profits on it are by no means so large as might at first be supposed. The annual loss on imported grape fruit and shaddocks is frequently as much as twenty per cent. ; limes, fifteen per cent. ; and on mangoes it is impossible almost to estimate it. It is a fruit extremely difficult of preservation, and very often a whole cargo is destroyed on the voyage from the West Indies.

There is probably as great a demand for pineapples in New York as for any species of imported fruit. Their very perish-

able nature is best shown by the enormous profits which importers expect to realize on the sound fruit. They cost between \$33 and \$34 a thousand in West Indies, and are sold here for about \$120 a thousand. The average loss on pineapples by decay on shipboard is about thirty per cent., and on bananas about twenty-five per cent. ; on grape fruit, thirty per cent. ; and on cocoanuts probably not more than fifteen per cent.

An immense number of cocoanuts are brought to New York every year. Those from South America are esteemed very much finer than those coming from Baracoa, the former frequently selling in this city for \$65 a thousand, while the latter seldom brings more than \$38. Their average cost at the ports of shipment is about \$20 a thousand, and the profits of the business are very large.

FOREIGN FRUITS WHICH HAVE BEEN TESTED IN FLORIDA.—Before the late war a Committee of the Legislature of Florida, composed of William D. Loring, James H. Randolph, H. H. Phillips, F. E. De La Rua, and John P. Baldwin, designated in a report, a "Schedule of Products to be Raised," of the several tropical and semi-tropical fruits and other products which would mature and be remunerative on the peninsula of Florida. This "schedule of products to be raised" was embodied in a resolution adopted by the Legislature and published by the State Government, for the information of the people. It is as follows :

Comptv, yam, casava, ginger, pulka, sisal hemp, indigo, tobacco, cortex cascarilla, canilla alba, sarsaparilla, sugar cane, pepper, bush and vine pepper, pimento, tea plant, orange, guava, otaheite plum, shaddock, lime, hog plum, forbidden fruit, lemon, Jamaica apple, grape fruit, citron, sugar apple, banana, pineapple, cocoanut, plantain, sapadilla, sour sap, avocado pear, mango, mame sapota, boxwood, lignum vitæ, mahogany, titi and ship timber.

CHAPTER XVII.

SOUTHERN COMMERCE; OPINIONS OF THE PRESS: NEW YORK HERALD, JULY 18, 1877; NEW YORK TRIBUNE, AUGUST 1, 1877; NEW YORK HERALD, AUGUST 18, 1877; NEW YORK HERALD, AUGUST 24, 1877; NEW SOUTH, 1876.

NEW YORK HERALD, JULY 18, 1877—*Editorial*.—We have more machinery of all kinds than we ever had before; we have more skilled mechanics and artisans; the ingenuity of our people has perfected labor-saving processes in every department of production. And the result of all this is that we are poor because we are too rich; we are suffering because our ingenuity, skill and abundant machinery enable us easily to make far more than we can use ourselves. Hence our home markets are glutted and our factories stand idle half the time. One of the broadest and most statesmanlike ideas which has ever been put forth by American public men concerns this very matter of more intimate, the most intimate, commercial relations between the United States and the nations of North, Central and South America. We are now one of the greatest manufacturing nations of the world. We use more and better labor-saving machinery than any European people. None of the other nations on these two continents have yet engaged largely in manufactures. They are not, like the people of Europe, our competitors. They produce mainly the raw materials of industry, and exchange these for manufactured products. They must continue for many years to do so, and they afford an almost illimitable market for our manufactures, if only we are wise and far-sighted enough to use our advantages.

A few figures will show how great are the opportunities which we have so long neglected for building up a market for our surplus manufactures in this hemisphere. Of the total imports of Mexico, amounting to over \$30,000,000, we send her only \$5,000,000. Canada imports about \$130,000,000, per annum, but takes only \$34,000,000 from us, her nearest neighbor. Brazil im-

ports about \$85,000,000, but takes a beggarly \$7,000,000 of our products, though we buy to the amount of \$35,000,000 from her. Chili imports about \$40,000,000, but takes only \$2,000,000 of our manufactures. The Argentine Confederation imports to the value of \$54,000,000 a year, but buys of us only \$1,500,000. The account is as one-sided in almost all the South and Central American countries. They buy elsewhere, mainly because they sell their raw materials elsewhere. From Chili for instance, we bought in 1876 only to the value of \$586,000 worth, while her total exports amounted to over \$35,000,000. The total exports of the Argentine Confederation amount to over \$50,000,000, of which we buy about \$4,000,000. It is easy to see that there is something wrong in all this. We neither buy nor sell as our skill, the excellence and variety of our products, and the enterprise of our people would lead us to expect; and when we look over the figures representing the total imports of these countries, who are our neighbors and our natural allies, no one can help seeing what an immense opening there is right here at our doors for the sale of our surplus products.

We can do without Europe; we need not seek to sell a yard of cloth or a pound of any manufactured articles in Europe, if only we can command, as we ought, the great and growing commerce of North and South America. Why should we continue to buy nearly \$100,000,000 worth of Cuban products and sell to the island, under a ridiculous, oppressive and antiquated commercial treaty, less than \$14,000,000 worth of our products? It is unreasonable. Why should we continue to sell to Brazil only \$7,000,000 of her \$83,000,000 of imports? We ought to be able to quadruple our sales to her with ease. We must sell our surplus before good times can be brought back. Every merchant and manufacturer knows that even so small a surplus as ten per cent. beyond the power of the country to consume is enough to crush every industry.

NEW YORK TRIBUNE, AUGUST 1, 1877.—The importations of sugar this summer are immense, and the exportations small. In eleven months the importations have been 1,329,944,035 lbs., against 1,233,060,717 lbs., in the corresponding period last year, and they have been made at 5 cents a pound, as against 4 cents last year. The export been about 36,000,000 lbs. Last year in the same period it was 56,000,000 lbs.

NEW YORK HERALD, AUGUST 18, 1877.—This country ought to have the largest share of the commerce of American States south of us from the Rio Grande to the Rio de la Plata. We produce in great abundance the commodities which those communities need, and by proximity of geographical situation we ought to command their markets for such manufactures as we can supply as cheaply as other nations. In all ordinary cotton goods, for example, we are in a position to compete with any nation in the world, so far as the trade depends on the quality and prices of the fabrics. And yet England has almost a monopoly of those extensive and profitable markets. The only reason why we cannot successfully compete with her is found in our lack of facilities for intercourse with the South American ports. It is not a more improved state of our manufactures that we need in order to command those large and profitable markets, but a revival and extension of our lost navigation. A difference of a fraction of a cent on a yard would enable us to capture the South American trade; but although we can place cotton goods on a Boston wharf cheaper than England can place them on a wharf in Liverpool, she can nevertheless undersell us at Rio or any other South American port. Her regular lines of steamships enable her to supply goods as they are wanted, whereas our irregular and desultory communication by sailing vessels makes it impossible for us to pursue an advantageous trade. The cost of transportation and the uncertainty of proportioning his shipments to the demand expose the American merchant to losses

to which the English merchant is not liable, and more than overbalance the superior quality and cheapness of the American goods. Our manufacturers will not have fair play until our shipping interest is revived, and it is among the clearest duties of Congress to relieve the general distress of our industries by such legislation as will rehabilitate our navigation and give us control of the extensive markets which by local position are naturally ours.

NEW YORK HERALD, AUGUST 24, 1877.—The Northwestern wheat crop has been a bountiful one. From statistics, it is estimated that there can scarcely be any important difference from the following figures:—

	1875.	1876.	1877.
	Bushels.	Bushels.	Bushels.
Minnesota.....	27,000,000	16,000,000	35,000,000
Iowa.....	29,000,000	18,000,000	37,000,000
Wisconsin.....	25,000,000	15,000,000	27,000,000
Kansas.....	12,000,000	12,000,000	20,000,000
Totals.....	93,000,000	61,000,000	117,000,000

These figures, showing that the four States above mentioned will have say 56,000,000 bushels more wheat to sell than they had last year, may be relied upon as being as near correct as the very best information can make them.

The aggregate wheat crop of Michigan, Indiana, Ohio, Kentucky and Tennessee will exceed the aggregate of last year by probably 35,000,000 to 40,000,000 bushels.

Illinois will yield nearly 300,000,000 bushels, and Iowa not fall much, if any, short of 175,000,000 of bushels.

NEW SOUTH 1876.—The following is the amount and value of sugar raised in Cuba, and the sum paid for freights between Havana and the United States, on sugar imported:

During 1873 the production of sugar in Cuba was 690,000

tons, of which 441,000 tons—64 per cent.—together with 180,000 tons of molasses, went to the United States. This constituted 80 per cent. of the foreign sugar and 90 per cent. on molasses consumed by the American people for the year. That is to say, 30 out of every 40 pounds of sugar used per capita in the United States in 1873 were supplied from the Island. Nor is this dependence upon the one cheap source of supply likely to be less extreme hereafter, while the amount of sugar required must increase enormously every year. Ten years ago the amount consumed in the United States was but twenty pounds per capita—a vast increase of consumption, wholly irrespective of the increase of population.

In 1873 not less than 441,000 tons of Cuban sugar were exported to the United States; the same was valued at \$77,500,000 which was in excess of the importations from France into the United States the same year, \$44,500,000. Furthermore, these Cuban imports gave an exceptional earning of \$4,000,000 to American shipping. Here, assuredly, is the most conclusive evidence of the vital concern which Cuban sugar production is to the business interests of the American people.

CHAPTER XVIII.

TEXAS PACIFIC RAILWAY.

EXTRACT FROM THE REPORT OF THE SENATE COMMITTEE ; EXTRACT FROM THE REPORT OF THE COMMITTEE OF THE HOUSE OF REPRESENTATIVES ; REMARKS BY REPRESENTATIVE HOUSE ; REMARKS BY SENATOR LAMAR ; REMARKS BY REPRESENTATIVE A. H. STEPHENS.

EXTRACT FROM THE REPORT OF THE SENATE COMMITTEE, MADE 1878.—The company is authorized to execute and deposit with the Secretary of the Treasury its own bonds, at the rate of \$20,000 per mile, for the construction and equipment of the line between Fort Worth and San Diego, except for the difficult and mountainous regions, not to exceed 250 miles, where it is authorized to execute its bonds at the rate of \$35,000 per mile, and not to exceed for construction and equipment purposes, \$31,750,000. They are to run fifty years, and bear interest at the rate of five per cent. per annum, all payable in coin.

The land grant conferred by the charter, and estimated at the land department to be about 18,000,000 acres, is to be reconveyed to the government, which is authorized to open the reservation made in pursuance of the original act, and all the lands within it to be subject to sale and settlement, and the government is authorized to sell the lands within the reservation at the usual rates affixed to public lands in railroad reservations, and credit the company with one-half or the proceeds on its interest account.

EXTRACT FROM THE REPORT OF THE COMMITTEE OF THE HOUSE OF REPRESENTATIVES, MADE 1878.—The financial crisis of 1873, which prostrated so many interests and ruined so many fortunes, crippled all railroad enterprises, and has made it impossible to negotiate railroad securities in any of the money markets of the world except at a heavy if not ruinous discount. By this finan-

cial storm the Northern Pacific was swept into bankruptcy, its mortgages foreclosed, and the purchasers at the mortgage-sale are now here asking the same subsidy to complete the work that was originally granted to that line.

By its legislation, Congress has declared the necessity for three trans-continental lines of railway, one to afford facilities to the northern, another to the central, and the other to the southern portions of the Union. To the first, the Northern Pacific, a grant of about 47,000,000 of acres of land, the most of which is equal to any lands on this continent, has been given. The second, the Union Pacific, and the Central Pacific, with their branches, have received government aid in lands amounting to upward of 50,000,000 of acres, and in bonds amounting to upwards of \$64,000,000, on which the government has paid \$—— interest. The third, the Texas Pacific, has received a grant of lands estimated at about 18,000,000 acres.

REMARKS OF REPRESENTATIVE HOUSE.—In 1837 France had eighty-five miles of railway constructed. In 1842 the government turned its attention to the important subject of building railroads. It commenced by aiding private companies to the extent of three-fifths of the cost of construction, the remaining two-fifths to be paid by the companies. Again, in 1852, the Emperor gave the government guarantee of interest in investments in railroads bearing 4 and 5 per cent. interest. The effect was almost magical. Capital was unlocked and came from its hiding places to become an active agent in promoting and stimulating enterprise; the great highways were rapidly constructed, and the close of the year 1857 witnessed forty-four hundred and seventy-five miles of completed railway in France. The effect upon the commerce of the country was no less marked than marvellous.

An era of unexampled prosperity dawned upon the entire land. In 1850 the exports and imports of the empire were

\$510,000,000 in round numbers; in 1857 they had increased to \$1,065,000,000, thus having been doubled in seven years. The great lines of railway paid 10 per cent., and the government guarantee was not called for. The Emperor still continued his wise aid by guaranteeing the interest on bonds and otherwise, so that France, in 1865, had eighty-one hundred and thirty-four miles of railroad in successful operation, and her total exports and imports had reached the enormous sum of nearly \$1,500,000,000. An hour at last came to France, when the enlightened policy which had thus laid the foundations of her prosperity, broad and deep, proved her salvation and rescued her people from ruin. The gigantic struggle with Germany entailed upon France the payment of \$1,000,000,000. It was predicted that she would be crushed and her people made bankrupt by the immense debt. But if Louis Napoleon failed to lead the French army to victory in that memorable struggle, his wise policy and forethought furnished a harbor of safety from the storm. France paid the debt within two years—every dollar of it in coin—and thus performed the greatest financial miracle that history records. What enabled her to perform it? Says Mr. Spofford, in his valuable work, the *American Almanac for 1878*:

One conspicuous element in that national prosperity which has brought the world to a wandering recognition of the vast resources of France is the recent development of her commerce.

The same policy pursued by England has produced a like effect upon her commerce. In 1842 the total value of British exports and imports was £116,000,000; in 1850 they had increased to £171,000,000; in 1855, to £260,000,000; in 1860, to £375,000,000; and in 1865, to £490,000,000. This vast increase is mainly due to the railway system so wisely fostered by the government. Without her railroads it would have been impossible for her commerce to have grown to such magnitude. In vain will the husbandman toil, the manufacturer and the artisan

exert their energy and skill if the transportation to convey the product of their skill and industry to market be denied them.

The separation between Belgium and Holland took place in 1830. At the separation the commerce of Holland and all her means of communication and transportation were far superior to those of Belgium. In 1839 the Dutch exports and imports were, in round numbers, £28,500,000, about double those of Belgium. In 1862 the exports and imports of Holland were £59,000,000, while those of Belgium at that time were £78,000,000. What thus enabled Belgium not only to overtake but to pass Holland in the race for commercial supremacy? The question admits but of one answer. In 1834 Belgium passed a law to build at government expense a system of railways. In 1839 she had in successful operation one hundred and eighty-five miles of railroad, and 1864 she had thirteen hundred and fifty miles completed. The result was a most unexampled increase in her commerce, both domestic and foreign, and in all her industries. Holland in the meantime had acted on an anti-subsidy resolution, and had reaped the fruit of that economy which saves the pennies and throws the pounds to more enlightened and enterprising nations.

A brief survey of the tempting fields that surround us, inviting us by every promise of remunerative harvests to put in our sickles and reap may not be unprofitable or inappropriate in this connection. The commerce of South and Central America and Mexico naturally belongs to us. The great advantages which we have over England and the continent of Europe in the matter of distance, is by no means weakened by the fact, that the governments prevailing in those States were in the main modeled after our own, and derive their inspiration from our example. We have impressed the spirit of our institutions upon their people, and we can command their commerce if we have the wisdom and the enterprise to do it. These countries in the aggregate

contain a population of about forty millions of people, and embrace an area of between seven and eight millions of square miles, and possess a foreign commerce of about \$1,000,000,000 in value, which is rapidly increasing every year.

Nothing but the most short-sighted policy on our part can deprive us of our just and proper share of this commerce. They now buy from us about 12 per cent. of their importations and from England about 60 per cent.

Within the last ten years Great Britain has expended in subsidies to enlarge her foreign commerce upward of \$52,000,000, while for the same period the United States have expended something more than five millions.

REMARKS BY SENATOR LAMAR—Will this Government appropriate \$2,000,000 annually for the completion of a railroad connection with the Pacific, the material and moral effect of which upon the prosperity and strength of the whole Union no language can describe? Will the advantages of such a road as a postal road, as a military road, as a political road, and as a commercial road, justify the annual expenditure of \$2,000,000? This expenditure, it must be borne in mind, will not be any new outlay or additional expenditure, but simply the diversion of money that is sure to be expended in other less efficient and less economical channels.

Sir, the amount is not one-half of that which you appropriate annually for rivers and harbors without discussion. It is not equal to what this Government expends annually in the maintenance of two cavalry regiments. It is not as much as this Government expended before the war for mail transportation alone to the Pacific coast. And the question recurs, and I press it upon this body, if the complete construction of a railroad to the Pacific Ocean is not worth as much to this Government in the increase of national power, in the development of national wealth, as the transportation of the mail to the same coast was worth to

this Government before the war, when we had but thirty million population and when the postal demands of that country were not equal to what they are now in South California, Arizona, New Mexico, Southwestern Texas—demands which are unmet by the existing transcontinental communication.

Nor, sir, is it fair to say that this guarantee of interest would be a vast debt of \$100,000,000 pressing upon the resources of the people. It is true that the expenditure of the \$2,000,000 per annum, if the Government has to pay it, will in fifty years aggregate \$100,000,000. But the same is true of all annual appropriations. You might as well claim that building a fort to protect the harbor of New York, or that the appropriations for the support of the Army, of the Navy, of the Government itself, constitute a debt. Calculate what these cost per annum and what would it be in fifty years.

My purpose is to show that the road is a great national enterprise; that its results will be to increase the national power, to develop the national interests, and to augment the wealth and prosperity of the people of the whole country, and that in the completion of it there will be an ample compensation to the Government for any aid it may render.

Allow me, sir, to indicate a few of the benefits that will result to the South especially, and through her prosperity to the nation at large from this connection. The South has every condition of soil, climate, and raw material for the development of a great industrial community. She can produce cotton, wool, hemp and jute. She has vast mineral deposits, especially coal and iron, and, in my opinion, the application of the machinery used in California and Nevada to the gold mines of Georgia, would develop there a product of that precious metal that would add materially to its volume in the world. The Southern States have a vast area of forest growth. I remember that the Senator from Massachusetts, upon his return from his visit to New Orleans, through a

section of the South that was not thickly wooded, was deeply impressed with this fact. Mr. Webster, when he traveled through the South, was equally impressed. These immense forests of excellent timber invite manufacturers of wood. Scarcely a product of the North, sir, or of England, is there that may not be as cheaply produced in the South.

She has already begun her industries of the future, and the profits that are realized from them are, in some instances, prodigious. But, to develop these industries, she must have free access to the markets of the world, and be able to attract to herself the skill and capital, and the appliances of the machinery of the North. Nature has given her a soil and climate peculiarly adapted to the growth of cotton. It can be raised more cheaply than in any other section of the globe. The crop of last year was 4,700,000 bales. It will probably be larger next year, perhaps 5,000,000,000 bales. The only other countries producing cotton to any extent, are Egypt, India and China. Last year England took 67 per cent. of her cotton from the United States. The manufactures last year amounted to an equivalent of nearly 6,000,000,000 pounds.

Although four million, seven hundred thousand bales of cotton were raised last year, the Southern States have, as yet, but a small percentage of their cotton lands under cultivation. These lands can produce enough to clothe the world. It is estimated that not more than two hundred millions of people are yet reached by machine-made cotton, but that there are fully six hundred millions that will yet be clothed with fabrics wrought by machinery. The spindles of the world are sixty-eight millions, thirty-nine millions of which are English, nine millions six hundred thousand American, and about twenty millions throughout Europe. They give employment to about one million men and women, boys and girls; and the entire manufacture amounts to an equivalent of about ten billions of yards. That this product, enormous as it is,

is to be doubled in the next few years, is one of the probable events of the future. The entire amount of cotton imported into Great Britain from 1850 to 1860 was 1,006,000,000 pounds. From 1866 to 1877, eleven years, the amount was 17,148,000,000 pounds. Taking it for granted that there is to be a corresponding development in the future, in what direction shall we look for a market? The fields which are most inviting are Mexico, South America, China, Japan, Australia, and the Islands of the Pacific.

But, sir, there is still another cause. The conditions of American society are, for the first time in half a century, stagnant and unprogressive. The forty millions of the people of this country cannot safely remain in this condition. They are energetic, aspiring, restless, eager. The whole history of the American people has been one of dramatic movement and interest. For a long time it was the march of emigration to the West, the advance of pioneers, the receding of frontiers, the felling of forests, the opening of fields, the rearing of school-houses and court-houses, the organization of society into communities, and communities into Territories, and Territories into States—opening up civil employments as objects of a noble ambition, and giving all that was aspiring and energetic and progressive full scope for unlimited development.

Then came the acquisition of the great Territories of Louisiana and Florida, followed some years after by the annexation of Texas. Then the Mexican war, which gave a grand field for employment and activity to the martial spirit of the country. Then the acquisition of our Pacific empire, the discovery of the gold mines, the rush of population to that shore, the vast influx of the precious metals into this country, increasing the prices and giving an impulse to industry in all its forms. Then came, sir, the great contest about slavery in the Territories, followed by a war which strained the energies of both sections to their utmost, accompanied as it was with the grand enterprises of Government

subsidies and aids to railroad connections between these Atlantic and Pacific States, giving employment to thousands of laborers and opening demands for innumerable markets, filling up the intermediate country with population, and with towns and cities, and commerce, and great commonwealths—when, sir, all of a sudden there is a pause in this grand movement. No railroad enterprises are going on. Thousands of laborers have been thrown out of employment on that account, and that has stopped the demand for the production of all other manufactures and industry, and this by inevitable law stops the profits of merchandise. And this eager people, in the very youth of their vigorous existence, with no objects of internal development, with nothing of external progress, find themselves expending their energies in communistic excitement and intestine commotion. Here I think you have the most efficient cause of that hidden discontent which flamed out so fearfully but a year ago.

REMARKS BY REPRESENTATIVE A. H. STEPHENS.—I ask the attention of the Senators to the views of one whose fame needs no tribute from me, but whom I am proud to call my friend, Hon. A. H. Stephens, of Georgia :

A liberalized currency would tend greatly to relieve the producing sections of the country ; but such influences are a mere drop in the bucket as a means of rehabilitating the South, the Southwest, and the Southeast, when compared with the building of the Texas and Pacific Railroad, and as a means of reviving the industries of the whole country. At least twenty States would instantly feel the quickening impulse and would throb with rejuvenated vitality in all their industries. Think of the vitalizing effect upon southern industries, particularly resulting from the expenditure of the money necessary to construct the road ; of the thousands of mechanics, unwilling idlers now ; of the young men of education now vainly seeking clerkships ; of the laborers in every pursuit of industry, who would be provided

with remunerative employment were the enterprise set in motion. Besides, too, the increased value of land and other property in the States east of the Mississippi would be enormous. In this respect alone the increased wealth to Mississippi, Alabama, Georgia, Kentucky, Tennessee, the Carolinas, and Virginia from increase of business and travel over this road would amount to figures that would startle us now could they be given.

What we want now is stimulation of business. Just as in the human system stagnation superinduces congestion, so we are suffering in matters of commerce and manufactures. Money is locked up because there is nothing to invite it from the coffers of capitalists. Ten millions of dollars spent in the ensuing year in an enterprise like the Texas and Pacific would start one thousand millions. Iron foundries and steam-mills now inactive would be revived. Timber, cross-ties, blacksmiths' materials, iron and wood, in all their varied uses, would be in great demand, and in the work of constructing this great continental enterprise there would be employment for all kinds of railroad labor, from that of the chain-carrier to that of the bridge-builder. There would indeed come a great business and industrial revival far exceeding any ever known in America. Immigration that has heretofore shunned the South would then be tempted, and invited because of facilities for reaching that section never enjoyed before, and because of the inducements of soil and climate.

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CHAPTER XIX.

MAIL SERVICE TO BRAZIL.

EXTRACT FROM THE REPORT OF THE COMMITTEE OF THE HOUSE OF REPRESENTATIVES; EXTRACT FROM THE REPORT OF THE COMMITTEE OF THE SENATE; REMARKS BY SENATOR EUSTIS; REMARKS BY SENATOR MAXEY; REMARKS BY SENATOR BLAINE; REMARKS BY SENATOR SERGEANT; REMARKS BY SENATOR EATON; EXTRACT FROM A LETTER BY GENERAL BUSSEY.

EXTRACT FROM REPORT OF COMMITTEE HOUSE OF REPRESENTATIVES ON MARCH 1, 1878.—Mr. Waddell, from the Committee on Post Offices and Post Roads of the House of Representatives, made a report on the bill H. R. 3580, to grant a subsidy to a line of steamships from the United States to Brazil, from which report the following is an extract :

" In assigning their reasons for recommending any legislation in regard to ocean mail-transportation, the committee desire to say, at the out-set, that the subject involves considerations reaching very far beyond the mere postal interests of the government. Indeed, the latter are of secondary importance. The main object contemplated is the revival of American commerce, by the opening of new avenues of trade, thus giving a quickening impulse to all our industries. A liberal policy—such a policy as that adopted by other countries to our great disadvantage—in fostering our merchant marine by every means, including liberal compensation for carrying the mails, is absolutely necessary, in the judgment of the committee, to the national welfare at this time.

" The decadence of our foreign navigation is alarming. Since 1857 the proportion of tonnage as between our own and foreign ships engaged in trade to and from this country has been reversed, although the commerce has increased nearly 100 per cent. In 1857 the value of the foreign trade carried to and from all

American ports in American bottoms was \$510,000,000, and the total carried in foreign bottoms was \$213,000,000. In 1867 the figures were reversed, foreign ships carrying \$580,000,000, while American ships carried only \$296,000,000. In 1877 the proportion was still greater against us, foreign bottoms carrying \$858,000,000, to \$315,000,000 carried in American bottoms, and this being a million less than our vessels carried twenty-five years ago. It is estimated that we now pay yearly to foreign ship-owners, for carrying passengers, goods, and mails, at least \$50,000,000. Steam is rapidly superseding sails, and, with the same tonnage, does three times the work. Our steam marine is insignificant, and, therefore, we cannot compete with the other nations of the world in the carrying trade until we build it up. Europe has 200 steamships running to and from the United States, and the United States has less than 15 steamships running across the Atlantic and Pacific Oceans. Three-fifths of the exports, nine-tenths of the imports, and all the passengers and mails to and from New York, go by steamships. Twenty years ago we spent for ship-building \$25,000,000 per annum, exclusive of the immense sums expended for repairing old vessels. Nearly all this money was paid for labor. Now we expend less than half this sum, or about \$11,000,000.

“The tonnage in our foreign trade has doubled, but our ship-building has been reduced one-half. Our sailing-vessels, so far as foreign trade is concerned, are little more than so much dead capital. The coasting-trade, protected by law against foreign interference, is about all we have left that is profitable, and there is danger that even this remnant of our former commercial glory will pass away from us unless our policy is changed. Surely we will not permit our merchant marine to be destroyed, and the carrying trade of our country, situated as it is geographically, and absolutely matchless in its resources, to be transferred permanently to other hands. The time has come when we are

forced to consider this subject. Our home markets are glutted with manufactured goods and other products, and unemployed labor starves in our streets. Outlets must be found for these products by opening new channels of commerce, or reclaiming old ones. Our necessities, social and political, no less than commercial, demand it. We cannot afford to neglect it any longer.

"Perhaps the most remarkable feature in the history of American commerce is the strange indifference which has always, until now, existed in this country in regard to trade relations with the empire of Brazil. It is a magnificent country, governed by an enlightened ruler, and rapidly progressing toward a condition of the highest prosperity. It covers an area of nearly 4,000,000 square miles, and contains a population of 12,000,000. It has a foreign commerce of \$200,000,000, and a coasting-trade of about \$50,000,000, open to foreign flags. Of this trade, which is yearly increasing, the United States has less than \$50,000,000, and exports only about \$7,250,000 to that country, although it needs a great many, if not most, of our manufactured products. The rest of the trade is with Europe, and the gold we pay to meet the balance of trade against us goes to England to purchase supplies for Brazil, all of which supplies we ourselves produce.

"England, France, and Germany each has steamship lines to Brazil, and each pay very liberally for the transportation of the mails there and elsewhere on the high seas. England pays her lines about \$3 per mile, and France pays hers over \$7 per mile, for every mile traveled, for transporting the mail to Brazil. It will, of course, take time to divert a large portion of this South American trade to the United States. England will make a desperate effort to retain it. Although, after establishing a monopoly of trade, she has sometimes reduced or entirely withdrawn her large mail-pay, she has never done so as long as there was competition. She has paid in this way in the last ten years over fifty millions of dollars, and she is mistress of the seas.

"We believe the cultivation of closer commercial relations with Brazil, and other parts of South America of vital importance, and we are satisfied that private enterprise, unrecognized and unassisted by the Government, cannot successfully compete with the well-established European lines for this trade, fostered and sustained as the latter are by their respective Governments."

In the fine imagery of their language, the Indians call the Amazon the "The King of Rivers." It empties into the ocean under the line. Now look : Nature has scooped out the land in Central America, and cut the continent nearly in two there, that she might plant between the mouth of the "King of Rivers" and of the "Father of Waters" an arm of the sea capable of receiving the surplus produce which the two grandest river-basins on the face of the earth are some day to pour into the Gulf of Mexico and the Caribbean Sea. These two sheets of water form the great commercial lap of the south. This sea and gulf receive the drainage of all the rivers of note in both continents except the La Plata on the south, the Columbia on the west, the Saint Lawrence and those of the Atlantic seaboard on the east.

In one river valley, winter and summer, spring and autumn, mark the year and divide the seasons; in the other, the seasons are the wet and the dry, and the year is all summer. One valley is in the northern hemisphere; the other in the southern. When it is seed-time on one side, the harvest is ripe on the other. The Caribbean Sea and the Gulf of Mexico are twin basins; they are seas wholly American. The great equatorial current having its genesis in the Indian Ocean, and doubling the Cape of Good Hope, sweeps by the mouth of the Amazon, and after traversing both Caribbean Sea and Gulf of Mexico, it meets with the Gulf Stream, and places the commercial outlet of that river almost as much in the Florida Pass as is the mouth of the Mississippi River itself. Two travelers may set out from the Yucatan Pass

one north for the source of the Missouri, the other south for the head waters of the Amazon. If, when the former reaches the base of the Rocky Mountains, he will cut a tree down, and let it fall in the river, so that it will drift with the current without lodging by the way, it will meet in the straits of Florida one cut and cast into the Amazon by the other traveler from the sides of the Andes, and floated down that river in like manner. The natural route for the drift-wood from both to the open sea is through the Gulf of Mexico, around the peninsula of Florida, and so out into the Atlantic through the Gulf Stream.

These twin basins are destined by nature to be the greatest commercial receptacles in the world. No age, clime, or quarter of the globe affords any parallel or any conditions of the least resemblance to those which we find in this sea or gulf. What other arm of the ocean is between two continents with opposite seasons? Where is there another Gulf Stream uniting the waters of an Amazon with the waters of a Mississippi—an extra-tropical with an inter-tropical river—and placing the commercial outlets of both before the doors of one and the same people? Where in the wide ocean or the wider world, is there another sea that is the natural outlet for a system of river-basins draining an extent of arable and fertile lands greater than the continent of Europe can contain; that yield all the productions of the torrid and temperate zones; and that are so situated withal that, from opposite hemispheres, with their opposite seasons, they will deliver into the markets a crop every six months? Famine can never visit such a land.

This beautiful sea is in a position to occupy the summit-level of navigation, and to become the great commercial receptacle of the world. Our rivers run into it, and float down with their currents the surplus articles of merchandise that are produced upon their banks. Arrived with them upon the bosom of this grand marine basin, there are the currents of the sea and the winds of

heaven, so arranged by nature, that they drift it and waft it down hill and down stream to the great market-places of the world. To one who has never studied the course of the wind and currents of the sea and the influence which they exert upon the routes which vessels must pursue in order to accomplish their voyages to and fro across the ocean, it appears startling to be told that the shores of the Southern States of Florida and the Carolinas are on the wayside of vessels bound from the mouth of the Amazon, the Orinoco, and the Magdalena rivers, to Rio de Janiero, as well as to Europe. The way out upon the high seas from the mouth of these rivers, and from that of the Mississippi, is practically one and the same.

EXTRACT FROM THE REPORT OF THE COMMITTEE OF THE SENATE.
 —The present methods of mail communication between this country and Brazil are discreditable to American enterprise, and present a formidable hindrance to the enlargement of our trade with South America. There being no direct line of steamers, letters from this country, destined for the Atlantic ports of South America below Pernambuco, go first to Liverpool, three thousand miles, and thence five thousand miles by the west coast of Africa to Brazil. Occasionally a British steamer comes from Rio to New York, but carries no return mail, for she goes to Europe laden with American products, and thence back to Brazil laden with European fabrics. The passage of a steamer direct from the United States to Brazil is now unknown. On the other hand, England, France, Germany and Belgium maintain direct steam communication with Brazil at large cost, maintaining nine regular lines of large, first-class iron steamships. The result of this lack of direct transportation of mails, passengers and merchandise between the United States and South America, and of the extraordinary facilities afforded by European lines, is readily, and to the country most painfully, apparent.

Between 1870 and 1875, inclusive, Brazil made exports of the

total value of \$577,041,492, of which the United States received \$274,148,500 ; showing that we purchased very nearly one-half of all that Brazil exported.

During the same period, Brazil made imports valued at \$471,570,859, of which the United States furnished only \$48,853,535 ; showing that we furnished only about one-tenth of all that Brazil imported.

The large balance against us in our trade with Brazil for this period of six years, \$225,294,945, was remitted by us through England and France and Germany, which, during the same period, furnished Brazil with nearly \$400,000,000 worth of their products.

The United States imports from and exports to Brazil for the last five years have been singularly uniform, viz :

Year.	Imports.	Exports.
1873.....	\$38,540,376	\$7,090,987
1874.....	43,889,647	7,560,502
1875.....	42,028,863	7,631,865
1876.....	45,446,381	7,252,218
1877.....	43,498,041	7,497,118

Showing a balance of trade against us during these five years of more than \$175,000,000, or an average annual balance against us of \$35,000,000 ; all of which enormous sum we have yearly paid by remittances to Europe, and Europe has sent her manufactures to Brazil to an equal amount. Or in plain words, we annually pay England, France, and Germany \$35,000,000 for the fabrics which they send to Brazil.

Our imports from Brazil are principally coffee, with also some rubber, hides, wool, and sugar, and some woods for dyeing and for ornamentation. Our exports to Brazil are mainly flour and other breadstuffs, codfish, petroleum, and lumber. We send very few manufactured goods, as nearly all fabrics are furnished from Europe.

A similar, if not worse, exhibit might be made of our commercial relations with the Argentine Republic and other South American nations, from which we make large imports and to which we make only very moderate exports, while England, France, and Germany supply their wants and profit by the monopoly of their trade.

REMARKS BY SENATOR EUSTIS.—Mr. President, the question really is, whether we shall take advantage of the experience of other nations, those nations which have so far succeeded in excluding us from trade with these South American countries, merely by this system of subsidizing steam mail lines. Now, sir, we have to deal with facts. It is by steam communication that the trade of the world is controlled. If any nation proposes to extend or enlarge, or expand its commercial relations with any other nation, I think that the proposition is established beyond question that that trade can only be controlled by rapid steam communication between those countries.

I would call the attention of the Senate to some statistics, showing the condition of the trade between Brazil and the United States:

Imports.....	\$274,148,500
Domestic Exports.....	48,853,555

BUREAU OF STATISTICS, May 7, 1878.

EDWARD YOUNG,

Chief of Bureau.

HON. J. B. EUSTIS, UNITED STATES SENATE.

Statement of United States imports and domestic exports of merchandise from and to Brazil, during the fiscal years from 1860 to 1877, inclusive:

Year.	Imports.	Domestic Exports.
1860.....	\$21,204,803	\$5,644,040
1861.....	18,100,456	4,748,202
1862.....	12,747,230	3,774,249

1863.....	10,945,476	7,454,292
1864.....	14,388,889	5,252,387
1865.....	9,784,312	6,485,872
1866.....	16,816,803	5,603,817
1867.....	19,100,300	4,964,308
1868.....	23,595,740	5,585,465
1869.....	24,837,403	5,779,559
1870.....	25,161,219	5,665,098
1871.....	30,551,324	5,942,416
1872.....	30,112,384	5,860,755
1873.....	38,540,376	7,090,987
1874.....	43,889,647	7,560,502
1875.....	42,028,863	7,631,865
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Thus it appears that our imports from Brazil, between 1860 and 1877, increased over 100 per cent., while our exports to it increased only about 20 per cent.

I will also call the attention of the Senate to the articles of import into Brazil, to show how easily we could furnish the articles which are now being furnished by England and by France. Look at what a small proportion we furnish of Brazil's imports of boots and shoes, cod and other fish, butter and cheese, and agricultural implements :

Statement, showing value, in milreis, of imports into Brazil :

Articles.	From other Countries.	From United States.
Boots and Shoes.....	1,978,978	2,877
Cod and other fish.....	1,714,703	74,929

Butter.....	2,115,414	13,316
Cheese.....	635,481	1,074
Lard.....	268,979	242,463
Flour.....	4,257,331	2,880,439
Tea.....	623,999	205,419
Tar and Pitch.....	47,553	2,686
Gums, resins, balsams, &c.....	282,591	106,680
Petroleum, kerosene, &c.....	1,541,642	1,430,829
Spirits of turpentine.....	89,198	69,881
Perfumery.....	671,201	181,650
Pine lumber.....	284,470	133,742
Furniture.....	250,004	53,873
Straw hats.....	606,396	2,207
Line, cement, &c.....	427,877	9,854
Coal.....	5,537,405	197,582
Earthenware.....	1,037,334	65
Glassware.....	407,966	24,215
Gold-leaf, jewelry, &c.....	757,659	380
Iron and steel.....	981,427	522
Iron and steel rails.....	245,452	5,345
Other manufactures of iron and steel.	2,818,367	60,617
Watches.....	369,740	1,800
Clocks.....	63,956	33,159
Railroad cars.....	76,504	45,542
Agricultural implements, mach'ry, &c.	2,374,736	268,688
Other machinery and tools.....	1,758,062	319,437
Umbrellas.....	375,454	.....
Matches, &c.....	296,316	19,377
Cotton, cotton fabrics, and clothing..	41,858,359	409,112
Arms and ammunition.....	1,179,580	9,008
Paper for printing, writing, walls, &c.	1,376,426	84,828
Wool, woolen fabrics, and clothing..	10,337,409	978
Flax, linen fabrics, and clothing.....	5,382,425	3,839

CHAPTER XIX.

MAIL SERVICE TO BRAZIL.

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“In assigning their reasons for recommending any legislation in regard to ocean mail-transportation, the committee desire to say, at the outset, that the subject involves considerations reaching very far beyond the mere postal interests of the government. Indeed, the latter are of secondary importance. The main object contemplated is the revival of American commerce, by the opening of new avenues of trade, thus giving a quickening impulse to all our industries. A liberal policy—such a policy as that adopted by other countries to our great disadvantage—in fostering our merchant marine by every means, including liberal compensation for carrying the mails, is absolutely necessary, in the judgment of the committee, to the national welfare at this time.

“The decadence of our foreign navigation is alarming. Since 1857 the proportion of tonnage as between our own and foreign ships engaged in trade to and from this country has been reversed, although the commerce has increased nearly 100 per cent. In 1857 the value of the foreign trade carried to and from :”

Iron and steel, and manufactures thereof, including nails, from Pittsburgh and other towns on the Upper Ohio.

Lumber, from Louisiana, Mississippi, and Florida.

Railroad cars, from Ohio, Illinois, and other northwestern States.

Tar and pitch and spirits of turpentine, from North Carolina, would probably go, to some extent, via New Orleans.

Paper and paperhangings, to some extent.

Besides the above the following would, to a small extent, be exported via New Orleans : boots and shoes, clothing, cotton and woolen goods, harness, cigars, snuff, &c.

Very respectfully yours,

EDWARD YOUNG.

HON. J. B. EUSTIS, UNITED STATES SENATE.

If we look, Mr. President, at the amounts which other governments have paid and pay to-day to support steamship lines, it is not surprising that an American steamship in foreign ports should be a matter of curiosity. A naval officer the other day, stated at a banquet given in New York by the Chamber of Commerce, that one day in the port of Rio Janeiro he counted 46 steamships, English, German, Italian, French, but not one which bore the American flag. In 1876 not a single vessel cleared from the port of New Orleans for the port of Rio de Janeiro although we imported in that year over \$6,000,000 from Brazil, which came mostly in British bottoms. England, in 1871, paid for steamship subsidies \$6,000,070 ; and as fast as her steamship lines become self-sustaining of course the amount of these subsidies is gradually decreased, so that in 1876 she paid \$4,420,000 to subsidized steamship lines. France, 1877, paid to steamship lines at the rate per mile of 31 francs and 85 centimes, which makes \$6.37 per mile which France paid to her subsidized lines. I have a list of the subsidies paid by other countries per mile :

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Year.	Total amounts.			United States
	£	s.	d.	gold. Dollars.
1866.....	845,403	13	0	4,227,018
1867	815,993	13	9	4,079,966
1868.....	808,517	13	8	4,047,586
1869.....	1,096,338	0	6	5,481,690
1870....	1,221,552	9	11	6,107,761
1871	1,214,148	12	4	6,070,741
1872.....	1,138,700	0	0	5,693,500
1873.....	1,133,057	17	9	5,665,296
1874.....	1,139,469	19	8	5,697,346
1875	972,000	0	0	4,860,000
1876.....	884,054	3	4	4,420,261

REMARKS BY SENATOR MAXEY.—What are the benefits to result? When you come to the great manufacturing and mercantile North and East the cry comes up from every portion of that country that they are over producing, that they cannot find a market for their surplus productions. Laborers are thrown out of employment; factories cease to work. New England manufactured goods have been sent even from the United States to Europe for sale. And when you come to the great valley of the Mississippi River, with its teeming millions of population, almost all agricultural, you find the same cry coming up. And when you cross the great Father of Waters and go west of the Mississippi River you find there, with its thriving, industrious, energetic population, a population not excelled anywhere, you find the same discontent.

A remarkable fact will show what we are doing. In 1853 there was a merchant-marine tonnage of 4,407,000 tons. In 1877, twenty-four years afterward, there were but 4,242,000 tons. Instead of progressing in this great industry, instead of that keeping pace with the other industries of this country, it has actually decreased in twenty-four years 165,010 tons.

Some other remarkable facts manifest themselves. In 1815 the tonnage of ships built in the United States was 154,624 tons. It runs up in 1855 to 583,450 tons, and in 1876 it fell back to 176,592 tons, or but 21,964 tons increase in sixty-one years. In those sixty-one years the population of this country has increased from about 8,500,000, as it was in 1815, until it is about 44,000,000, and increase in farms, the increase in cities, in railroads, in every industry in all this land, (except in ship-building, where it has been going down step by step,) has kept pace with increase of population, and ship-building is but 21,000 tons more in 1876 than it was in 1815, and is less by 406,000 tons than it was twenty-one years ago. That is a remarkable fact that we should notice.

REMARKS BY SENATOR BLAINE.—In the year 1857 our foreign commerce in this country amounted to a little over \$700,000,000, counting both ways, imports and exports, and American vessels carried \$500,000,000 of it, and vessels of all foreign nations carried but a shade over \$200,000,000 of it. Events have since happened which, of course, I cannot detain the Senate to fully review, but which I shall briefly glance at; and twenty years afterward, taking the statistics of 1877, what is the lamentable picture that is shown us? Our foreign commerce has increased to between eleven and twelve hundred millions, and the American vessels carry less than \$300,000,000 of it, and vessels of foreign nationalities carry over \$800,000,000 of it.

There is no rival left to England in the commercial world, and if she can bluff us out, or buy us out, or bully us out of a tariff that shall protect American industries and any enterprise that shall stimulate lines of American steamships, she will have done all she desires to do for her factories and for her commerce.

REMARKS BY SENATOR SERGEANT.—Senator Blaine quoted Senator Sergeant as having said one year before :

We have now to a very great extent, by means of this policy pursued by the government, control of the commerce of the Pacific Ocean. The Atlantic is an English or European mill-pond, and nothing more. We scarcely venture out upon it with our own American lines. The case, however, is reversed in regard to the Pacific, and there the enterprise of our people, aided in this manner by our government, has been able to seize upon the prominent lines of communication, and commerce is extended there on every hand. We have nearly as much control of the Pacific as England or any European power has of the Atlantic. The statistics show that there has been an increase of duties paid into the Treasury of the United States on account of the commerce built by the Chinese mail line, greater by a million and a half of dollars than the amount of subsidy which has been paid out by the government to aid in maintaining that line. The government has made money by it.

REMARKS BY SENATOR EATON.—The foreign trade of Brazil is about \$100,000,000 a year. It has been a little less heretofore, but doubtless it will be more hereafter, and in the near hereafter. Out of that \$100,000,000 a year, all that the United States has heretofore done is about \$7,000,000 a year. I took the statistics of trade a night or two ago, and meant to have brought them with me. England furnishes Brazil more than one-half of all her butter and cheese. On one single occasion forty-two thousand boxes of cheese were exported from New York to Liverpool, and from Liverpool to Brazil. Ohio cheese going that round-about route to British owners to find a market in Brazil! One-half of the flour that is consumed by the inhabitants of that empire is sold by English merchants, when every dollar's worth of flour, every dollar's worth of butter, every dollar's worth of cheese should be the product of the West. Without doubt fourteen hundred thousand dollars worth of boots and shoes are consumed in Brazil, and all that was exported from this country was barely

CHAPTER XIX.

MAIL SERVICE TO BRAZIL.

EXTRACT FROM THE REPORT OF THE COMMITTEE OF THE HOUSE OF REPRESENTATIVES; EXTRACT FROM THE REPORT OF THE COMMITTEE OF THE SENATE; REMARKS BY SENATOR EUSTIS; REMARKS BY SENATOR MAXEY; REMARKS BY SENATOR BLAINE; REMARKS BY SENATOR SERGEANT; REMARKS BY SENATOR EATON; EXTRACT FROM A LETTER BY GENERAL BUSSEY.

EXTRACT FROM REPORT OF COMMITTEE HOUSE OF REPRESENTATIVES ON MARCH 1, 1878.—Mr. Waddell, from the Committee on Post Offices and Post Roads of the House of Representatives, made a report on the bill H. R. 3580, to grant a subsidy to a line of steamships from the United States to Brazil, from which report the following is an extract :

“ In assigning their reasons for recommending any legislation in regard to ocean mail-transportation, the committee desire to say, at the outset, that the subject involves considerations reaching very far beyond the mere postal interests of the government. Indeed, the latter are of secondary importance. The main object contemplated is the revival of American commerce, by the opening of new avenues of trade, thus giving a quickening impulse to all our industries. A liberal policy—such a policy as that adopted by other countries to our great disadvantage—in fostering our merchant marine by every means, including liberal compensation for carrying the mails, is absolutely necessary, in the judgment of the committee, to the national welfare at this time.

“ The decadence of our foreign navigation is alarming. Since 1857 the proportion of tonnage as between our own and foreign ships engaged in trade to and from this country has been reversed, although the commerce has increased nearly 100 per cent. In 1857 the value of the foreign trade carried to and from all

American ports in American bottoms was \$510,000,000, and the total carried in foreign bottoms was \$213,000,000. In 1867 the figures were reversed, foreign ships carrying \$580,000,000, while American ships carried only \$296,000,000. In 1877 the proportion was still greater against us, foreign bottoms carrying \$858,000,000, to \$315,000,000 carried in American bottoms, and this being a million less than our vessels carried twenty-five years ago. It is estimated that we now pay yearly to foreign ship-owners, for carrying passengers, goods, and mails, at least \$50,000,000. Steam is rapidly superseding sails, and, with the same tonnage, does three times the work. Our steam marine is insignificant, and, therefore, we cannot compete with the other nations of the world in the carrying trade until we build it up. Europe has 200 steamships running to and from the United States, and the United States has less than 15 steamships running across the Atlantic and Pacific Oceans. Three-fifths of the exports, nine-tenths of the imports, and all the passengers and mails to and from New York, go by steamships. Twenty years ago we spent for ship-building \$25,000,000 per annum, exclusive of the immense sums expended for repairing old vessels. Nearly all this money was paid for labor. Now we expend less than half this sum, or about \$11,000,000.

“The tonnage in our foreign trade has doubled, but our ship-building has been reduced one-half. Our sailing-vessels, so far as foreign trade is concerned, are little more than so much dead capital. The coasting-trade, protected by law against foreign interference, is about all we have left that is profitable, and there is danger that even this remnant of our former commercial glory will pass away from us unless our policy is changed. Surely we will not permit our merchant marine to be destroyed, and the carrying trade of our country, situated as it is geographically, and absolutely matchless in its resources, to be transferred permanently to other hands. The time has come when we are

CHAPTER XX.

APPROPRIATIONS FOR PUBLIC WORKS AND SUMMARY.

UNITED STATES APPROPRIATIONS FOR PUBLIC WORKS; ADVANTAGES TO BE REALIZED FROM THE CONSTRUCTION OF THE ROAD; SUMMARY.

UNITED STATES APPROPRIATIONS FOR PUBLIC WORKS.—Besides the aid extended by the National Government for the promotion of commerce and the development of unsettled territory, in the form of land grants and the extension of its credit in behalf of the construction of Pacific railroads, Congress has also, from time to time, since the organization of the Government, contributed largely towards the improvement of rivers and harbors, the safety of navigation, and the construction of wagon roads and canals. The value of all these aids, and the proportion which they bear to the amount of private capital expended in the construction of railroads, are matters of public interest. It appears that from the time of the adoption of the Federal Constitution until the close of the fiscal year ending June 30, 1873, the Government had appropriated in aid of public improvements the following sums :

For improvement of rivers and harbors.....	\$32,680,340
For light-houses, beacons, fog signals, marine hospitals, and other aids to navigation and commerce on navigable waters.....	16,937,115
For construction of railroads, canals and wagon roads, including bonds issued to Pacific railroads.....	104,705,163
Estimated value of public lands granted in aid of the construction of railroads.....	52,575,150
<hr/>	
Total aid extended to close of fiscal year ending June 30, 1873.....	\$206,897,768

The total expenditures of the Government in aid of the construction of railroads, canals and wagon roads, and for the improvement of rivers and harbors and securing the safety of navigation, were, however, but five per cent. of the amount of the private capital expended in this country for the construction of railroads.

The total amount contributed by the Government in aid of railroads alone, in comparison with the total cost of the railroads of the United States, as estimated by H. V. Poor, Esq., of New York, was as follows :

Total amount of the contributions of the Government.....	\$144,213,078
Estimated cost of the railroads in the United States.....	4,658,208,630

It appears, therefore, that the National Government had at the end of the year 1876 contributed only three per cent. of the entire cost of the vast railroad system of the United States, all the rest being the contribution of private enterprise.

Assuming, however, that the Government had been reimbursed for the lands granted to railroad companies by the increased value of alternate sections retained, it appears that the net contribution of the Government to the entire railroad system of the country was less than two per cent. of its cost.

ADVANTAGES TO BE REALIZED FROM THE CONSTRUCTION OF THE ROAD.—This railroad connects the United States with the Islands of the West Indies, with the nations of Central America and with the nations of South America. It will practically connect the system of railroads in North America with the systems of railroads in the three divisions of the southern part of this hemisphere. It will produce a greater interchange of the productions and wealth of the tropics and semi-tropics, with the United States, and it will bring within the range of the commerce of the United States, the products of their manufactories, forests,

ranches, plantations, orchards, vineyards, gardens, rivers, coasts, and mines. It will give an outlet to the products of our manufacturing, soil and mines, still more varied and yet wholly different, from those of the tropics. It will develop a commerce, which is as broad as the commerce of the continent itself. It will bind together with a bond of friendship and mutual interests, the two halves of the continent and with them the islands of the Caribbean sea. It will elevate into a higher civilization and a fuller and warmer friendship, the people of the nations of the South with our own. It will divert from Europe to this country the commerce of these nations which Europe now controls. It will afford a shorter and more rapid line of travel between this country and each and all of the countries south of it. It will give to the United States not only one new line of commerce, but will open scores of new lines in the undeveloped nations which it will reach by its ocean lines, and by them it will bring to our shores the untold millions of wealth which now flows to Europe. It will permanently cheapen freights between the United States, the West Indies, Central America and South America. It will insure the more prompt transmission of all commodities, and in ever increasing quantities, to each and every part of this country. It will give to our own people the control of the gold and silver mines of Central and South America. It will develop a unity of feeling between the United States and a score of other nations; and will so interweave the national interests, that whenever it may be the pleasure of this country to invite any one of them into the community of States, they will accept the invitation with thankfulness and each will finally add a star to our flag.

It will pass through and develop a country within our own limits, upon which Nature has lavished her choicest bounties of soil and climate; where the choicest forests of the country now stand, and where Nature has prepared a field upon which the

sugar and fruits to supply the world may be grown when the hand of man may plant the seed.

It will develop and perfect our postal system to, and in those countries where it is now most weak and most neglected. It will enable the Navy and War Departments to so strengthen and protect the passage of the Gulf in time of war, that no nation on earth can force the passage of the strait of Florida, or occupy the Gulf of Mexico, or occupy the mouth of the Mississippi river with a hostile fleet or army. It is the key to the military and naval occupation of the Gulf of Mexico and the Caribbean Sea. It is taken, all in all, the greatest national work now projected in the United States, and offers greater advantages to the people than any other.

SUMMARY.—The Great Southern Railway must prove one of the most valuable and profitable railway lines in the United States—Because: It is a direct, immediate, and the only possible railway line, stretching five hundred miles south of any other railroad between the temperate zone and the tropics of America, between 50,000,000 of people in the United States and Canada, and 44,000,000 in the West Indies, Central and South America. Twenty per cent. of the foreign commerce of the United States is with the countries which this road and its steamship connections reach. Eleven per cent. of the commerce of the United States is with the West Indies, which this road almost touches. The chartered rights of the company cover the steamship lines necessary to bring this commerce over this route. All the Central, Western and Northwestern States are nearer Havana by this line than they are to New York; and all traffic between these States and the tropics, even the heaviest freights will pass over this line, and ocean transportation does not come into competition.

All United States Mails for the West Indies and Central and South America will pass over this line, at a saving over present

routes from New York of from four to six days. All passengers to and from the countries above named will pass over it, avoiding a sea voyage of over 1,100 miles. All Express and Fast Freights, to and from all the United States and all the countries named, will pass this way on account of the saving of time and distance. The Military Stores and Supplies for the United States Forts on the Gulf of Mexico, and stores and supplies for the Gulf, West Indies, and the South Atlantic squadrons, will reach their destinations by it. It is the only line by which Tropical Fruits can be brought quick and fresh to northern markets. It brings the products of Market Gardening in Florida within the available reach of New York and the north throughout the winter. It opens the whole of Florida and Cuba to the quick and comfortable access of winter tourists and invalids. It passes through and opens a richer and longer reach of yellow pine and live oak timber than any railroad in the United States. It will do more business in the transportation of Sea Island Cotton than all the railroads in the United States and a large business in the northern part in Short Staple Cotton. It reaches and opens the largest and best stocked cattle range in the United States, except in Texas, and will transport more cattle both to the north and to Cuba, than any other road.

All the travel and traffic between all the United States and the entire peninsula of Florida will pass over this line, it being little more than half the distance, as compared with the present route by rail. It crosses four navigable rivers and touches two others, making more than 2,000 miles of river navigation tributary to it. Eight other completed railroads connect with it, and are so located as necessarily to give their traffic to it. The transportation of naval stores will be greater than on any other railroad in the United States. It has no competing railroad or river, and the geography of the country is such that it never can have.

CHAPTER XXI.

ARGUMENT BEFORE THE COMMITTEES.

ORGANIZATION ; LOCATION ; TURTLE HARBOR ; OBJECTS OF THE ROAD ; ADVANTAGES ; IN CONGRESS ; RAILWAYS IN ENGLAND, FRANCE AND INDIA ; IOWA AND FLORIDA ; UNITED STATES SUBSIDIES ; SENATOR MALORY ; A RAILROAD PRACTICABLE TO KEY WEST ; MILITARY IMPORTANCE OF THE ROAD ; GEORGE WASHINGTON'S VIEWS ; GEORGIA AND FLORIDA ; MAILS AND MILITARY ; LUMBER, COTTON AND CATTLE ; CONNECTIONS ; CONCLUSION.

MR. CHAIRMAN AND GENTLEMEN OF THE COMMITTEE :—We desire, with your permission, to occupy your time a few moments in presenting to you the merits of the Great Southern Railway Company (consolidated), and in stating the laws under which the company is acting, and the line of its road or route through the States of Georgia and Florida. We will endeavor to give you a correct idea of the geography of the country through which it runs, the points of interest with which it connects, the obstacles to be overcome in its construction, and we hope to demonstrate the great value of a railroad through those States to Key West.

ORGANIZATION.—In February, 1870, the State of Florida, through its Legislature gave the Company a charter to build a railroad and telegraph line from the northern boundary of the State to Key West.

In October, of the same year, the Legislature of Georgia gave a charter to A. C. Burk and others to build a railroad and telegraph line from Millen, in Georgia, to connect with the Great Southern Railway Company of Florida, with special authority to consolidate with the Florida Company.

Under these charters, two companies were regularly organized, and went to work, spending about \$200,000 ; they surveyed,

cleared the tract of timber for 91 miles, and graded, and got out ties, for about 45 miles. This work was done partly in each State.

In June, 1872, Congress passed a law giving the Great Southern Railway Company of Florida the right of way through the public lands in that State, with twenty acres, every ten miles, for stations, with timber and other material necessary to build the road. There was no Government land in Georgia.

In January, 1874, the Legislature of Florida passed a consolidation act authorizing the Florida Company to consolidate with the Georgia Company.

LOCATION.—In November, 1874, the two companies were consolidated, and now form the Great Southern Railway Company (consolidated).

The line of this railway as located and partly constructed, commences at Millen, Georgia; thence it runs in as near an air line south as the nature of the country will admit, passing through Jesup, Georgia, and King's Ferry, on the Saint Mary's River which divides Georgia and Florida, and thence in Florida, through Jacksonville, Palatka, and Orlando, to Turtle Harbor and Key West. Length of main line 750 miles; branch road to Tampa Bay 126 miles; total, 876 miles.

The route from Millen to Jesup, Georgia, is through a finely timbered country with but one river of importance to cross, the Altamaha. From Jesup, where it makes connection with the Atlantic and Gulf and the Macon and Brunswick Railroads, it runs in a southerly direction crossing a tributary of the Finhal-loway, near its junction with the main stream, passing over the most favorable ground to the Brunswick and Albany railroad. Thence its general course is nearly due south until it reaches, at Owen's Ferry, the Satilla River, which it crosses, and passes over a favorable surface to the Saint Mary's River at King's Ferry. At Callahan it crosses the Florida Railroad, and thence

runs to Thomas Creek, meeting the Jacksonville, Pensacola and Mobile Railroad near Jacksonville. The entire distance from Jesup to Jacksonville is 90 miles.

The surface of the country over which the line passes is extremely favorable for railroad construction, there being no gradient greater than 40 feet per mile, and this only in a few places, and for short distances, and there are no engineering difficulties which cannot be easily overcome.

From Jacksonville to Middleburg the country is of very much the same character. Middleburg is situated on Black Creek, a navigable river, 250 feet wide, with high banks. From this point to the Bellamy Road, west of Picolata, the country is slightly rolling, and most of the way the land is good and well timbered. The whole of the country on the line from Middleburg to Palatka will be in great demand for its valuable pine and oak, as well as for cultivation. From the Bellamy Road to Palatka the country is level, with two small creeks to cross.

From Palatka to Orange Springs the country is also level and well timbered, with two creeks to cross, and both small. From Orange Springs to Adamsville the line passes through one of the best populated and most fertile regions in East Florida. It is slightly rolling, but nowhere requiring a higher grade than 60 feet per mile. There is much valuable land along this portion of the line, and no water to cross from Orange Springs to Adamsville, and the country is level to Turtle Harbor with the exception of a small chain of sand hills. There are large quantities of live oak upon the hammocks, the prairies and savannas along the Kissimmee River, and hundreds of acres of prairie and savanna land exceedingly valuable for cultivation, and especially for the cultivation of sugar.

The line, after crossing the Kissimmee River, which is about 150 feet wide, will run through the prairies of the Kissimmee. The road bed will be firm, but will require to be raised about two feet high.

From the Kissimmee, by Forts Floyd and Van Swearingen, the line runs upon a slightly elevated ridge until it reaches township 40 S., Range 41 E. There is a large quantity of saw grass land of the best quality lying east of this ridge, which, at small cost, could be put under cultivation. From there to the Miami River the line runs on a ridge of pine land lying between the Everglades and the inlets and bays of the Atlantic. As before stated, the country is generally level, and well adapted to the construction of a railroad. There are several rivers to cross, but none of them will require a trestle more than 200 feet long. Along this portion of the line, and upon the rivers it will cross, and upon the Atlantic coast, will be opened up by the construction of this road the most valuable country in the South for the cultivation of tropical fruits, coffee, etc., as well as a most attractive place of resort to the large number of visitors from the north and northwest in the pursuit of a tropical winter.

The ridge above referred to is rocky, of coral formation, but nearly level, and continues to Turtle Harbor. It is the best tropical fruit country in the United States. There are from Fort Van Swearingen to Turtle Harbor hundreds of hammocks of the richest land known, upon which there is a heavy growth of live oak, with other growths of timber unknown elsewhere. The route passes many of the most beautiful inland lakes in the world, and the lands are of great value ;—most of it would have been in cultivation before the war but for the want of railroad communication. Upon no other line of railroad in the United States can a country be reached so rich in its resources for tropical productions, and in the value of its pine and live oak forests.

The road can be constructed from Biscayne Bay to Key West at a slight cost per mile above ordinary railroad construction, and for less money than the average cost of roads in New England. From the mainland at the western extremity of this bay

to Key West is 115 miles; from Turtle Harbor to Key West is 116 miles, and the line between these points will pass over keys or islands, which, like beads on a string, link Key West to the main land of South Florida. The cuts or passes between them are generally shallow and narrow, there being but one where nine feet of water can be found. They are all above the influence of the sea, and are, with few exceptions, densely covered with timber. This chain of islands lying along the route vary in size from ten to a thousand acres.

A survey of the route demonstrates the fact that the road can be built within the ordinary limit of expenditure per mile for railroads in our country.

Turtle Harbor is one and a half miles wide and three miles long. Its entrance is directly from the ocean, with a uniform depth of water both at the entrance and in the harbor itself, of 27 feet at low tide. The following is what Prof. Hilgard says of it:

TURTLE HARBOR can be entered with 27 feet at all times by steam vessels, and sailing vessels can ride safely at anchor in the outer harbor until opportunity serves to enter the inner harbor. Depots can be built without any difficulty. The great superiority of Turtle Harbor as a harbor is thus manifest.

Very respectfully yours,

J. E. HILGARD,

Assistant Coast Survey in charge of office.

OBJECTS OF THE ROAD.—This road, commencing at Millen, Georgia, and connecting by railroads at that point with the western, middle and eastern States, and running south about 700 miles to Key West, the extreme southern point of the United States, and the key of the Gulf of Mexico and the Caribbean Sea, presents one of the most important links between our country and the tropics, that can be derived from the geographical relations of North and South America, and the West Indies. The

amount of traffic that will pass over this road to and from all the ports of the West Indies, Central and South America, must be very great, and the commerce, which will require a large number of steamers and sailing vessels to work in connection with the road, will be gathered into Key West and Turtle Harbor. There will be through sailing vessels and ocean steamers, connecting between the southern termini of the road at Key West, and Turtle Harbor, and the Bahamas, the several ports of Cuba and Porto Rico, of St. Domingo, of Jamaica, Central America, of Southern Mexico, and, indeed, of many of those in South America, numbering in all more than 150 ports possessing a valuable commerce.

There is another fact in connection with this enterprise, that in a national sense, should not be overlooked: The lessening of time this line will make from the tropics to that portion of the United States north of the Appalachian mountains, and west of the Alleghanies, the valleys of the Ohio, the Northern Mississippi, and northern Lakes. This short line to the Tropics will speedily make Chicago, Cleveland, Cincinnati, Louisville, St. Louis and Nashville, the centers of a much larger import and export business.

The distance from Louisville and Cincinnati to Cuba by this route is 1,330 miles. Louisville and Cincinnati are not only the geographical centers, but the commercial centers of the commerce of the seven States of the Ohio valley. The distances of the principal grain markets of the west, by rail to New York are as follows: Chicago 987 miles; St. Louis 1,219 miles. From New York to Cuba is 1,245 miles. Thus, there would be a saving in distance to the grain shippers from the Ohio valley to the West Indies of an average of 982 miles.

The total movement of grain from the Western States, eastward in 1872, was 178,021,462 bushels, and southward 35,000,000 bushels. The West Indies, and South America take

about 15 per cent. of the entire exports from the United States, and with proper transportation would soon quadruple that amount. And this railway is the shortest, most direct, safest and cheapest channel of transportation to those countries.

With such facts before us, it does seem that the Government should not hesitate to adopt measures to establish more advantageous relations, and especially such measures as will tend to increase the amount of exports of grain, bacon, lard, and other farm products, as well as manufactured articles.

To get a correct idea of the increase of population and wealth we can only estimate from the census last taken. In 1870, we find that the seven Ohio States had 13,459,377 inhabitants, while the eighteen States having territory bordering on the sea-coast, had 15,921,352 population. In forty years, the census of 1870 shows the growth of population in the sea-coast States had been but little over 90 per cent., while that of the Ohio States had been a little over 200 per cent. At the same ratio, at the end of another period of forty years, the sea-coast States will have 30,269,189 inhabitants, and the Ohio States 40,258,131. Should the progress of the nation be as great in the future as it has been in the past, and the indications are that it will be greater, the seven Ohio States in population, and by analogy of reasoning, in wealth, will be as powerful an empire in all respects as the entire Union now is. What then will be the wants of those States for transportation?

Look at the increase in wealth of the Ohio valley during the past twenty years ending in 1870. In 1850 the value of property, real and personal of the seven Ohio States, was \$2,089,002,652; in 1860 it was \$5,171,501,897; and in 1870, \$10,726,839,301. The value of all the States was only \$30,068,518,507. In the eighteen sea-coast States the value in 1850 was \$4,324,577,745; in 1860 it was \$8,030,198,734, and in 1870, \$14,229,392,289.

From these figures it would seem that the value of property in the seven Ohio States has increased in the past ten years over one hundred per cent., and in twenty years over five hundred per cent., while in the sea-coast States it has only increased seventy-five per cent. in the past ten years, and about three hundred and thirty per cent. in the past twenty years ; including, in that period of time, California with her great mineral development.

Under the same ratio of increase as in the past ten years, in 1890, about twelve years from now, the valuation of property in those seven States, will be \$32,000,000,000, more than ten times our national debt.

It would seem also by these figures that the seven Ohio States will as much exceed the eighteen sea-coast States in wealth, as they will in population. Then this matter of transportation is not merely a question of to-day, but of great national importance in the near future.

To show the further advantage of this road to carry off the surplus manufactured articles from the heart of our country, we will give some facts and figures concerning the manufacturing interest of those seven Ohio States, compared with the eighteen bordering on the sea ; and for that purpose we will take the census of 1850, of 1860 and of 1870. In 1850 there were in the eighteen sea-coast States, 65,237 manufacturing establishments, producing \$639,771,163. In 1860 there were 66,959, producing \$1,121,303,395. In 1870, 101,580 manufactories, yielding \$2,237,236,305 products.

In the seven Ohio States in 1850, there were 36,277 factories yielding \$284,452,696 in products. In 1860 there were 49,099 factories, yielding \$568,188,147. In 1870, 97,568 factories yielding products to the value of \$1,408,916,550. From this it will be seen that the increase in the eighteen sea-coast States was, in twenty years, 36,307 factories, and \$1,597,465,-

138 in product, while in the seven Ohio States the increase was 63,291 factories, and \$1,124,483,854 in product. The factories of the Ohio States are of more recent date, and of less magnitude than the older ones of the eastern coast, and therefore of less capacity. Still, the rates of increase in the Ohio States is 175 per cent., and only about 56 per cent. in the Sea Coast States, or as three to one ; while the increase in products is only 25 per cent. less than the older sections. At the ratio of increase of the last ten years there will be, in twenty years from 1870, over 250,000 factories in the seven Ohio States. Their productions, accepting the average indicated, will be \$3,600,000,000, or 50 per cent. greater and larger than the entire imports and exports of Great Britain to and from all countries. This road is in great demand to supply the wants of this wonderful manufacturing Empire, surpassing in extent that of Great Britain, Belgium and France, the three great manufacturing fields of Europe, and to open a way by the most direct route to foreign markets. We have not attempted to draw upon the imagination, but have deduced this statement from official data.

It will render the great Basin of the West the rival of Europe in the commerce of the nations south of the United States. This road and proper ocean connections will turn the commerce of tropical America from Europe to this country, and give the United States what of right belongs to her, the control of the commerce of this continent. She never has had it, and our duty is to grasp every opportunity to secure it. We cannot overestimate the value of this enterprise in opening a new outlet for our surplus products. Hundreds of millions of dollars of trade and commerce are carried on with nations south of us, most of which now finds its way directly to Europe, and which should flow directly to our own country.

During the five years ending June 30, 1876, our commerce was as follows :

With the West India Islands, annual average imports from.....	\$89,158,094
Annual average exports to.....	36,944,808
With Central America and Eastern South America, annual average imports from....	66,158,094
Annual average exports to.....	21,114,854

A total commerce averaging..... \$213,375,850
 which is nearly one-fifth of our entire commerce with the world.
 And yet it shows a balance of nearly ninety-eight millions of dollars against us. On the other hand, we find that the commerce of England with these same countries during a period of five years ending December 31, 1874, was :

Annual imports from.....	\$121,576,058
Annual average exports to.....	117,237,350

A total commerce averaging..... \$238,813,408
 which is greater than ours, and yet her imports were only four millions of dollars greater than her exports. Brazil imports annually about \$85,000,000, of which less than two millions is furnished by us. Cuba is only ninety miles from our coast, and buys of us about \$14,000,000, while her annual importation is nearly one hundred millions.

Mails by this route will be carried from New York to Cuba in sixty hours, and to St. Domingo in thirty hours from the terminus of the road ; those from Central and South America in from four to six days. The great through mails between the United States and all the West Indies and Central and South America must eventually go by this line.

Politically the West Indies gravitate towards us. St. Domingo has asked to be admitted into our nationality, and whatever difference of opinion there may be with regard to annexation of territory, there can be but one opinion with reference to our in-

creased power and influence in the West Indies, with intimate daily communication and such additional commercial facilities as this road will supply. A national railroad binds the Atlantic and Pacific together, and so will the opening of this line of communication cement Cuba and the other islands of the West Indies to us in peace and amity, and in indissoluble commercial relations.

This railroad connects the United States with the islands of the West Indies, with the people of Central and South America, and it will practically connect the system of railroads in North America with the railroads in the three divisions of the southern part of this hemisphere. It will produce a greater interchange of the productions and wealth of the tropics and semi-tropics with the United States, and it will bring within the range of the commerce of this country the products of their manufactories, their forests, ranches, plantations, orchards, vineyards, gardens, rivers, coasts, and mines. It will give us an outlet for the products of our own manufactories, soil and mines, which are still more varied and yet wholly different from those of the tropics. It will develop a commerce which is as broad as the commerce of the continent ; it will bind with a bond of friendship and mutual interest the two halves of the continent embracing between them the islands of the Caribbean Sea, and it will elevate into a higher civilization the people of these, the sister nations of the United States. It will perfect our postal system to and in those countries where it is now weak and neglected. It will enable the Navy and War Departments to so strengthen and protect the passage of the Gulf in time of war, that no nation on earth can force its way through the Strait of Florida, or occupy the Gulf of Mexico, or the mouth of the Mississippi river with a hostile fleet or army. It is the key to the military and naval occupation of the Gulf of Mexico, and the Caribbean Sea, and we believe that it is the greatest national

work now projected in the United States, and offers greater advantages to the whole people of this country than any other enterprise of like character.

ADVANTAGES.—The geographical position of Florida relatively considered, renders her a great centre of trade and commerce of the continent, and presents her as an international avenue of traffic. With a great arm she reaches down from the body to grasp the products of the South in exchange for those of the North.

That this road will create business for itself and speedily return the capital embarked in its construction, we are abundantly persuaded. This opinion is confirmed by the highest authority on such questions known to railroad men in this country, H. V. Poor, Esq., who, in his admirable sketch of the railroads of the United States, published last year, says :

“ It is safe to estimate that the railroad tonnage of the country would duplicate itself as often as once in ten years, were there no increase of line or population, from the progress made in its industries, and in the mechanic arts.”

Mr. Poor amply sustains this proposition by facts deduced from the railroad history of the country, and says :

“ Our means will increase just in the degree in which we render available the wealth that now lies dormant in our soil.”

Speaking of the year 1869, he says :

“ The tonnage traffic of the railroads constructed the past year at only one thousand tons to the mile, will equal five million tons, having a value of \$750,000,000.

“ Every road constructed adds five times its value to the aggregate value of the property of the country. The cost of the works constructed the past year will equal at least \$150,000,000. The increased value, consequently, of property due to the construction will equal \$600,000,000.”

The observations of Mr. Poor are specially applicable to the

Great Southern Railway, the construction of which will not only create an immense volume of through travel, but develop a region not exceeded in native wealth by any equal area on the face of the globe ; which abounds in lumber forests, and embraces the natural home of sheep, and grazing fields in which herds of cattle, large enough to supply our entire market, may graze throughout the year, growing and fattening upon natural grasses, which in the peculiar atmosphere of the country do not decompose as ours do when exposed to the weather.

IN CONGRESS.—The Great Southern Railway Company has a bill before Congress asking the government to indorse and guarantee the interest on its bonds, at the rate of \$15,000 per mile, to aid in the construction of its road. It differs, however, from any other bill before Congress, in providing for the deposit of a sinking fund with the government, sufficient to pay the principal before the bonds are so endorsed, to wit : For every \$1,000 endorsed, the company deposits with the government \$110, to be invested by the Secretary of the Treasury in government bonds, bearing $4\frac{1}{2}$ per cent. interest, and the interest thereon to be annually invested in like manner. This will be sufficient to pay the principal of the bonds so endorsed at maturity, and therefore no contingency can arise to prevent such payment. A simple calculation will prove the truth of this statement. But further to secure the government against loss it gives a first mortgage on the road, and allows all money due the company for government work to be retained and applied to the payment of the interest. Thus the principal having been provided for and secured, and a part of the interest met by the services of the road to the government, and the road only mortgaged for actual money necessary to build, there can be no failure to pay the interest.

Such enterprises are a sure means of greatness to a State and Country ; they are but little seeds sown, but in due time produce prosperity and increase the wealth of nations.

RAILWAYS IN ENGLAND, FRANCE AND INDIA.—Prior to the year 1833, which has been declared to have marked the birth of the railway system of Great Britain, the imports and exports of that kingdom had become almost stationary; but from that time up to 1865 there has been built about 13,000 miles of railway, and the annual exports and imports of Great Britain increased from £85,000,000 sterling, to £490,000,000 sterling, or more than five-fold; and it is a remarkable fact that the steady increase was almost in exact proportion to the growth of the railway system.

France, profiting by this salutary lesson, as early as 1842, adopted measures by which the government agreed to bear three-fifths of the cost of a system of railways, and in 1852, under wiser management and statesmanship, the government adopted the system of guaranteeing interest upon bonds issued to build railways, at the rate of $4\frac{1}{2}$ per cent. per annum. The result was that in the short space of five years, capital flowed into that empire so rapidly, and such a stimulus was given to the construction of railways, that there were then 4,475 miles of road within her limits; the exports and imports increased from about \$500,000,000 in 1850, to about \$1,000,000,000 in 1857; and, in addition, the six principal railways paid to their shareholders 10 per cent. dividends, and the government was never called on to make good one dollar of its guaranty. But France needed more railroads. Private capital was insufficient to build them unaided by the government, and the empire induced the six principal companies each to undertake the construction of about 1,000 miles of additional line by a government guaranty of 4 per cent. interest on their bonds, amounting to \$600,000,000 of estimated cost of the works and 6-100 of 1 per cent. as a sinking fund to pay off the bonds in fifty years.

The Emperor also authorized departments and communes to construct railroads at their own expense, but aided their construc-

tion with subventions to the extent of from one-fourth to one-half of their cost. The result was that in 1865 France had 8,134 miles of railroad in operation, and her imports and exports had increased more than fourfold; and under the entire system the treasury of the government has been fully protected.

We have taken the following from the Statesman's Year Book for 1877, page 676:

"In the year 1845, two great private associations were formed for the purpose of constructing railways in India. But the projectors found it impossible to raise the necessary funds for their proposed schemes without the assistance of the State. It was therefore determined by the Indian government to guarantee to the railroad companies for a term of 99 years, a rate of interest of 5 per cent. upon the capital subscribed for their undertaking."

And from History of India, by L. J. Trother, page 348:

"Under the Governor-Generalship of Lord Dalhousie, a system of railways for India was planned from south to north and from east to west, which have been constructed to the extent of 7,152 miles."

This system or network of railways has undoubtedly preserved to the British Empire, "on which the sun never sets, and whose drum is heard round the world," the brightest jewel of her crown—India—to whose trade and treasure the far-seeing eyes of Missouri's great Senator, Thomas H. Benton, were turned, when, on a memorable occasion, in the United States Senate, he advocated the immediate construction of our present trans-continental railway.

IOWA AND FLORIDA were admitted into the Union the same year. Florida, through which this road will pass from one end to the other, supported by the richest archipelago on the globe, with more natural resources than any other State in the Union, has failed to materially increase her commerce or population,

while Iowa in the same space of time, with no contiguous commerce or actual wealth to assist her, except government aid to railroads within her borders, has developed a local wealth and increased her population a thousand fold.

UNITED STATES SUBSIDIES.—The cry against government assistance to organizations, for the purpose of works of internal improvement, is destroying the confidence of enterprise, and the nation languishes with coffers full of unemployed capital. The railroad is the modern pioneer. A great river has not the facility of a great railroad, and a railroad, through a great and fertile region, is the only practical agent for the development, protection and realization of natural resources.

Congress has, from time to time, since the organization of the government, contributed largely towards the improvement of rivers and harbors, the safety of navigation, and the construction of wagon-roads and canals. The value of all these aids, and the proportion which they bear to the amount of private capital expended in the construction of railroads, are matters of public interest

It appears that from the time of the adoption of the Federal Constitution until the close of the fiscal year, ending June 30, 1873, the government had appropriated in aid of public improvements, the following sums:

For improvements for rivers and harbors.....	\$32,680,340
For lighthouses, beacons, fog-signals, marine hospitals, and other aids to navigation and commerce on navigable waters.....	16,937,115
For construction of railroads, canals, and wagon-roads, including bonds issued to the Pacific railroads.....	104,705,163
Estimated value of public lands, granted in aid of construction of railroads.....	52,575,150

Total aid extended to close of fiscal year, ending

June 30, 1873..... \$206,897,768

The total expenditures of the government in aid of the construction of railroads, canals and wagon-roads, and for the improvement of rivers and harbors, and securing the safety of navigation, were, however, but five per cent. of the amount of private capital expended in this country for the construction of railroads. The total amount contributed by the government in aid of railroads alone in comparison with the total cost of the railroads of the United States, as estimated by H. V. Poor, Esq., of New York, was as follows :

Total amount of the contributions of the govern-

ment..... \$144,213,078

Estimated cost of the railroads in the United

States.....\$4,658,208,630

It appears, therefore, that the national government had, at the end of the year 1876, contributed only three per cent. of the entire cost of the vast railroad system in the United States, all the rest being contributed by private enterprise. Assuming, however, that the government had been re-imbursed for the lands granted to railroad companies by the increased value of the alternate sections retained, it appears that the net contribution of the government to the entire railroad system of the country was less than two per cent. of its cost.

SENATOR MALLORY, a gentleman with whose reputation for practical judgment and statesmanship, you and your colleagues are familiar, writes as follows in reference to this road :

“The practicability of constructing a railroad from this place to Key Biscayne Bay, and thence to a junction with existing railroads of the country, is evident to all who have bestowed attention upon the subject, and its accomplishment would materially shorten the sea travel.

Col. Heiss, the able and energetic Superintendent of the International Telegraph Company, has recently completed a *reconnois-*

sance of the country along the Atlantic sea-board, from Jacksonville on the St. John's River, to the Hunting Grounds at the western extremity of Key Biscayne Bay ; and from his report we may safely assume that the entire route between these points is especially favorable to railroad construction, and that it presents no greater obstacles than those surmounted in building the Fernandina and Cedar Key Road. It is well timbered with heavy pine, and well watered ; of a uniform elevation above tide water, and the lands generally invite cultivation. Key Biscayne Bay about six by ten miles in extent, is a beautiful sheet of water, and the Miami and Little rivers, and other smaller streams, all flowing from the Everglades, whose southern edge—six feet above tide water—is but five miles from the bay, flow into it. Settlements have existed on this bay for a century past continuously, and at present it is attracting the attention of parties wishing to cultivate tropical fruits.

A RAILROAD PRACTICABLE TO KEY WEST.—From the main land from the western extremity of this bay, the distance to Key West is 130 nautical miles. The Keys are all above the influence of the sea and are, with few exceptions, densely covered with timber, and a soil susceptible of cultivation. The theory that tropical fruits attain their greatest perfection nearest their northern limits, finds its verification here, where the lemon, the lime, the pine apple, the sugar apple, the sour sop, the sapadella, plantain and banana are superior to the same fruits of Cuba and those of the West Indies generally, as is the orange of Louisiana and Florida to that of more southern latitudes. The agave sisilliana from which the campeche or sisal hemp is manufactured, must soon become an important staple here. It flourishes as does the saw palmetto of the South, or black jack scrub of West Florida, without care or cultivation, and is as equally defiant of all enemies. A good machine for cleaning it is all that is necessary to induce the immediate occupation of the Keys for its production.

Many of them possess fine salt ponds, capable of producing millions of bushels, when in dry seasons a superior salt is spontaneously produced; and these will all be utilized under the influence of the suggested railroad.

Could you visit this region, and there are few portions of our country more attractive in winter, you would, I think, recognize the extraordinary advantages of a railroad to Key West, whose capacious harbor the largest ships of war or commerce may safely enter by day or night.

As your chart of this coast may not properly present the chain of islands referred to as lying under an air line of Key Biscayne Bay to Key West, I will state them from personal observation and a memory tolerably reliable. Beginning at the Bay we have the Ragged Keys, Soldier Keys, Elliotts Key, Old Rhodes Key, Key Largo, (30 miles long), Upper Mata Coomba, Lower Mata Coomba, Long Key, Conch Keys, Grassy Keys, Duck Key, Krall Key, Vacas Keys, Knights Keys, Pine Keys, (the only keys with pine barrens), Pigeon Key, Molasses Keys, Bahia Honda Keys, Summerlin Keys, Sugar loaf Key, New Found Harbor Key, Saddle Hill Keys, Boca Chica Keys, and Key West.

There are hundreds of other islands of like character lying along the route, and varying in extent from 10 to 1,000 acres, and nowhere on the globe are fish and turtle found in greater abundance or perfection.

Without special knowledge upon the subject, and without the data at hand for greater accuracy, I can still designate many of the steamships now employed between Cuba and the United States, and which are maintained mainly by the transportation of passengers.

There are seventeen passenger steamers, to which your better information may add, employed between the United States and Cuba, and upon voyages varying in length from sixty hours, between New Orleans and Havana, to one hundred and thirty-

two hours between Havana and New York. The proposed railroad to connect Key West with existing roads in Florida, and thence with the railroad system of the United States, would at once reduce the sea voyage between Cuba and any of our cities to six hours, the distance between Havana and this island, from wharf to wharf, being ninety miles, and the time between New York and Havana would be reduced from 132 to 80 hours. From a candid consideration of the increase of travel, which a reduction of ocean routes and of time, increased facilities and securities everywhere, indeed, we are justified in assuming that the opening of this route would double the travel between Cuba and the United States in two years, a result in which every branch of industry and trade in our country is interested. I omit all reference to that immense travel which the completion of the Tehauntepec road and canal, with the Panama and other connections), must induce, and which would mainly pursue this route.

A survey of the route referred to, demonstrates the practicability of constructing the road within the ordinary limits of expenditure per mile for railroad enterprises of our country. Not a yard of excavation would be required, and the character of the islands insure the most substantial of road beds. Under certain conditions the teredo is perhaps more active and destructive in these waters than in any others under the American Flag; but these conditions could not exist along this route, where piling would be chiefly confined to very shallow depths. An examination of the piles of all the wharves here, shows that the teredo's greatest power is exercised upon the piles that stand in the deepest water and strongest currents, and almost exclusively on that part of the pile which averages the highest and lowest tidal movement—a distance of about 26 inches.

MILITARY IMPORTANCE OF THE ROAD.—But there is a national view of this enterprise apart from the sale of public land, and

consequent general development, of paramount interest, and I will rather indicate it than state it in detail. In the event of a maritime war with a strong naval power, it is safe to assume that the first general naval action in which we shall be engaged, assuming that we may have sea-going iron-clads, will be here in the Strait of Florida: the actual mouth of the Mississippi. The Gulf of Mexico is in form a demijohn on its side, its neck or outlet formed by Cuba on the south and Florida upon the north. The distance between Key West and the Captain General's Palace in Havana, is but 90 miles, a distance which six ordinary steamers may bridge across and communicate with each other every 20 minutes. Nothing could pass even this small fleet unobserved. Through this narrow pass, this mouth not only of the Gulf but of the Mississippi, must come its vast and increasing commerce, and consequently here, beyond all other places upon the deep, would a strong naval power find its most attractive objective point.

We have constructed large works at Tortugas, Fort Jefferson, and a heavy work at Key West, Fort Taylor, at a fabulous expense, in recognition of this truth; and for six or eight months past the harbor of Key West has bristled with monitors and other naval ships, whose presence has doubtless exercised a conservative influence upon even the conduct of Cuban affairs. Unless the location and construction of these forts be a farce and failure, no man will deny the importance of securing the readiest means of reinforcing and relieving them. All supplies to them now, and the transportation of all troops to this point, are dependent on the risk of a sea voyage of days; whereas, with the railroad in question established, military and naval reinforcements and supplies would not only reach them without such risks, but would reach them in about one-fourth the time now employed. Is it not fair to assume, therefore, that in this national aspect would our government regard this enterprise, and that, so

regarding it, governmental assistance would advance its construction with the approval of all political schools."

GEORGE WASHINGTON'S VIEWS.—The following is an extract from a letter of General George Washington, dated Mount Vernon, June 18th, 1776, to Henry Lee, in Congress :

"My opinion is, that we should open all the communications which nature has afforded between the Atlantic States and the Western Territory, and to encourage the use of them to the utmost."

And again, in a letter to Richard Henry Lee, dated Philadelphia, July 19th, 1787, General Washington says :

"I have ever been of opinion that the true policy of the Atlantic States would be to open and improve the natural communications with the western country."

GEORGIA AND FLORIDA.—There are no two States in the Union to which the Government can afford to be more liberal than to Georgia and Florida, and we are justified in asserting that out of Territory ceded by Georgia, the Government has realized in cash the sum of \$40,000,000, besides grants made by her to works of internal improvement, and the Government has expended in Georgia for the construction of canals, railroads and wagon roads from 1789 to 1873 not one dollar. In California, \$2,506,000 ; in Michigan, \$1,330,000 ; in Kansas, \$2,422,000 ; in Ohio, \$2,102,000 ; in Missouri, \$1,049,000 ; in Maryland, \$1,051,000, all being much larger than that given in Florida, and thus it is seen that the amount of money expended for many of the States of the Union quadruples the amount expended for the two States in question.

This road, as we have said, will pass through and develop a country within our own limits upon which nature has lavished her choicest gifts in soil and climate; where great forests of pine and live oak stand, and where there are lands upon which the sugar and fruits to supply our whole country may be grown.

The line must prove one of the most valuable railways in the United States, for it is a direct, immediate, and the only possible railway, stretching 500 miles south of any other, between the temperate zone and the tropics of America. There are over 50,000,000 of people in the United States and Canada, and 44,000,000 in the West Indies, Central and South America. Twenty per cent. of the commerce of the United States is with these countries, which this road and its ocean connections will reach. All the central, western and north-western States are nearer Havana by this route than they are to New York, and hence most of the traffic between these States and the tropics, even much of the heaviest freight will pass over this line.

MAILS AND MILITARY.—All the United States mails for the West Indies, Central and South America, will be carried this way at a saving of time over present routes from New York, of from four to six days. All passengers to and from our country will travel on this road, avoiding a sea voyage of 1,155 miles, and all express and fast freights will be shipped by this line on account of the saving in both time and distance.

The military stores and supplies for the United States forts on the Gulf of Mexico, and stores and supplies for the Gulf, West Indies, and South Atlantic Squadrons, will reach their destination by this line. It is the only line by which tropical fruits can be brought quickly and in fresh condition to the northern markets; it brings the product of market gardens in Florida within the available reach of New York, and north and north-western cities throughout the Winter, and it opens the whole of Florida and Cuba to the quick and comfortable access of Winter tourists and invalids.

LUMBER, COTTON AND CATTLE.—It passes through and opens up a richer and longer reach of yellow pine and live oak timber than any railroad in the United States; it will do more business in transportation of Sea Island cotton than all the railroads in

the country, besides the short staple cotton in the northern part of the State of Florida, and it passes through the largest cattle ranges in the United States, except Texas, and will transport more cattle to the north and to Cuba than any other road.

CONNECTIONS.—Nearly all the traffic and travel between the other States and Florida will pass over this road. It crosses four navigable rivers and touches two others, making more than 2,000 miles of river navigation tributary to it. Eight other completed railroads connect with it, and are so located as to give their traffic to it. The transportation of naval stores will be greater than on any other railroad in the United States.

This road in running north from Key West, will first connect with the Jacksonville, Pensacola and Mobile R. R., at or near Jacksonville, which runs to Tallahassee, Pensacola and Mobile, Ala., and from there to New Orleans.

The next intersected is the Fernandina and Cedar Keys R. R., which runs from Fernandina to Cedar Keys, a road wholly within the State of Florida.

Then it crosses the Brunswick and Albany R. R., which runs from Brunswick, passing Butler King on the Atlantic and Gulf R. R., thence to Albany on Flint River a great Railroad centre. From there with its connections, to Georgetown on the Chattahoochee River, thence to Montgomery, Ala., Monroe and Shreveport, La.

At Jesup it connects with the Atlantic and Gulf R. R., which runs from Bainbridge through Jesup to Savannah, where it connects with the Savannah and Charleston R. R., and its connections, extending through the eastern part of the States of North and South Carolina, Virginia, Maryland, Pennsylvania, New York, and the more northern States.

Connection is also made at Jesup with the Macon and Brunswick road, which runs from Brunswick by Jesup and Lumber City on the Altamaha River, a navigable stream, thence to Ma-

con, Atlanta and Chattanooga on the Tennessee River, where it connects with the Cincinnati Southern; from there to Nashville, Louisville and Cincinnati, and so on to Chicago, Detroit and the Lakes; also from Nashville to St. Louis and all parts of the Northwestern States.

At Millen, the northern terminus of this road, it connects with the Great Central Railroad of Georgia which runs in three directions from that point—one to Savannah, one to Macon, and one due north to Augusta, Ga. From there to Columbia, South Carolina, where six roads concentrate, and from there to Charlotte, N. C., where there are also six roads, going in different directions. Thus it will be seen that the Great Southern Railway will connect at several points with the network of railroads extending throughout the whole country. Most of them, however, are East and West roads, while ours is strictly a North and South road. Take for instance, Key West, which is due south from Augusta, on the northern boundary of Georgia, and the principal points to be touched by the Great Southern Railway are Millen, Jesup, King's Ferry, Jacksonville, Palatka, Orlando and Key West, and they do not vary ten miles from a north and south line, so this may be said in every sense of the word to be a north and south railroad.

IN CONCLUSION, Mr. Chairman, and gentlemen of the Committee, this road will extend and enlarge the facilities of commerce between distant parts of our own country and foreign nations, and will bring into existence sources of industry and great wealth, and, we think, will create a new era of prosperity, affording investment to hidden capital, employment to idle hands, and comfort and happiness, we hope and believe, to now impoverished homes.







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